

FOCUS

FINTECH IN KOREA

Will the Korean Fintech Industry
Actually Take Flight?

ECONOMY & FINANCE

STAGNANT GROWTH

Korea's Economic Growth Rate
Expected below 3%

INDUSTRY

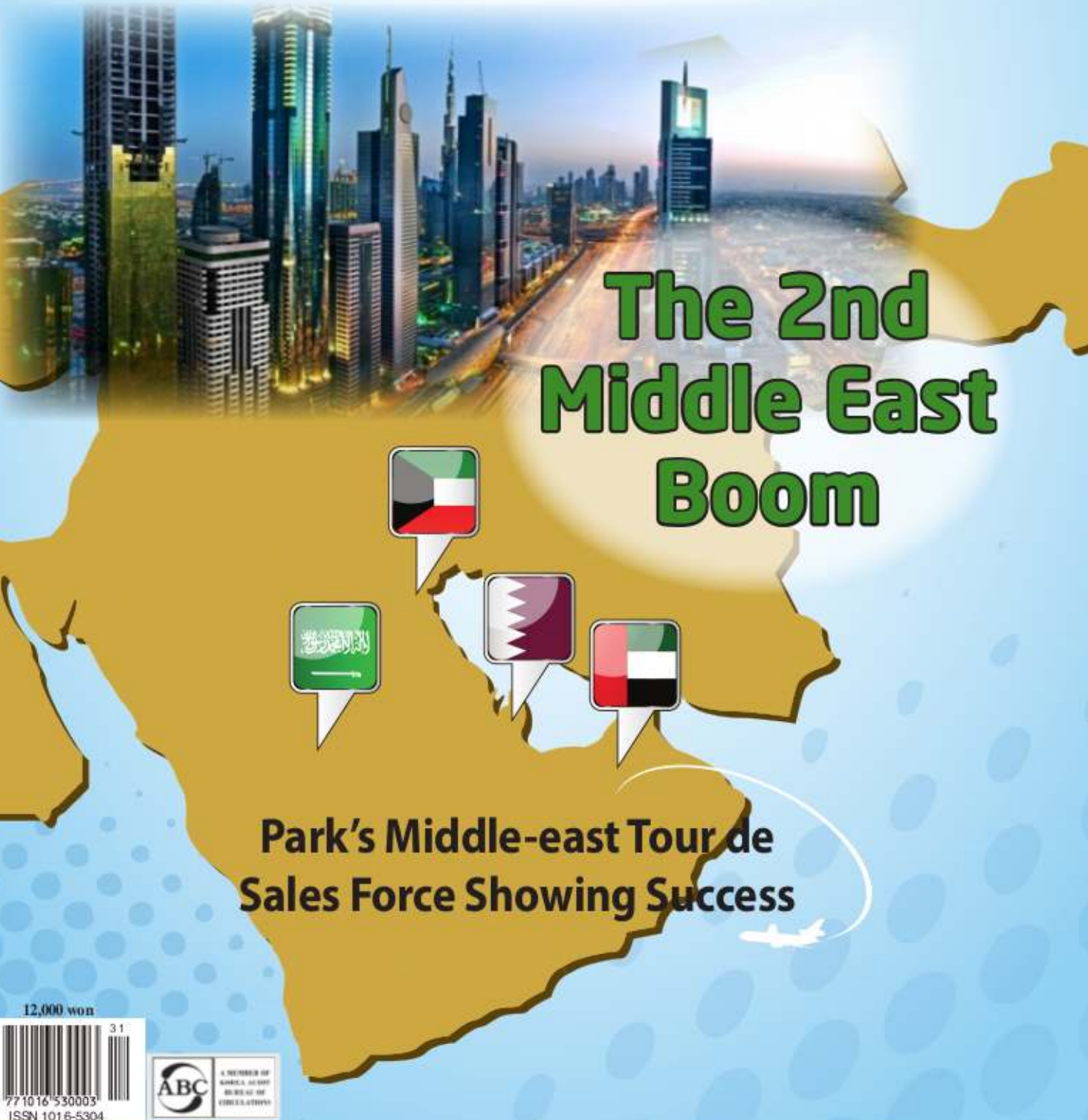
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The 2nd Middle East Boom

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National Core Interests Should Be Kept

On March 16, the Chinese Assistant Foreign Minister and the U.S. Assistant Secretary of State for East Asian and Pacific Affairs both landed in Seoul four hours apart. After meeting with his Korean counterpart Lee Kyung-soo, Chinese Assistant Foreign Minister Liu Jianchao, who arrived first, told

reporters that he delivered China's concerns and worries over the deployment of a Terminal High Altitude Area Defense (THAAD) battery, which will help, he hoped, the U.S. and South Korea make a reasonable decision.

U.S. Assistant Secretary of State for East Asian and Pacific Affairs Daniel Russel told reporters on March 17, a day after he arrived in the country, that Washington wondered why a third party is opposed so strongly to a security system that has not been discussed yet and is just a theory.

South Korea is now becoming a theater where the expansion of Chinese power crashes outright with the riposte of the U.S. in Northeast Asia. The issues of AIIB and THAAD are forcing the nation to show a clear stance over the issues and to make a choice between their ally and their largest trade partner.

As far as THAAD deployment is concerned, the Korean government has so far stuck to strategic ambiguity with its stance of "3 Nos" -- No Requests, No Consultations, and No Decisions. If China cannot do anything about North Korea's nuclear weapon and missile issues, the choices that South Korea could make over the THAAD issue as the ally of the U.S. couldn't help but be limited.

In relation with AIIB, Korea has already signed a free trade agreement with the U.S., and will sign an official agreement with China soon. Therefore, the Korean government should actively join the economic blockades led by the two global powers without hesitating over the choices between the TPP or CERP, and ADB or AIIB.

Accordingly, the Korean government should keep the ambiguity strategy for the time being, and induce the U.S. and China, which could ultimately solve North Korea's nuclear and missile threats, to a table for their direct negotiations to address the issues.

There are also not a few voices in South Korea opposed to the deployment because they doubt the effectiveness of the defense system. It is a responsibility of the U.S. to clearly demonstrate that a THAAD deployment in Korea would not be a threat to China and also be effective against the North's missiles if Washington wants to make any headway with the defense system here.

In the growing conflicts between the two powers, the Park Geun-hye administration should also protect the core interests of the nation that has grown into being one of the global economic powers, rather than a country that met its misfortune in special interest clashes among the powers surrounding the Korean peninsula a century ago.

Park Jung-hwan,
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Next Marketplace

Will the Korean Fintech Industry Actually Take Flight?

by Matthew Weigand

New financial applications of technologies are especially difficult to create, due to the highly-regulated and conservative nature of the finance sector. However, increasing pressure from hundreds of new ideas and the demands of discerning customers is bringing about slow, yet noticeable, change.

This change has been labeled “fintech,” or financial technology. And while it is still in its nascent stage, being hindered by government regulations and institutional reluctance, some governments are making overtures to eliminate or modify some regulations. Also, while the regulatory authorities don't want to completely give up on their leadership in the face of change, they do recognize that change is necessary.

In Korea, the relevant authorities are seeing changes happening overseas, and are considering similar domestic reforms. They are also opening the monetary floodgates to allow investment into new small and medium-sized fintech enterprises. And, with financial incentives growing, more local IT companies are considering taking the fintech development road.

Korea Lagging Behind

According to a report on the trend of the global financial technology (fintech) and its implications for Korea recently published by the KT Economics & Management Research Center, the local fintech industry is still in its early stage. On the other hand, the fintech sector in advanced countries is growing rapidly.

The number of fintech start-ups is rapidly increasing in other countries, along

with large-scale investments. Data compiled by market research firm Venture Scanner shows that 1,027 fintech companies around the world are engaged in 17 areas as of Nov. 2014. A total of US\$12.9 billion was invested in these firms.

By country, the U.S. already went through the early stages of the fintech revolution, and fintech has approached the level of being able to change people's lifestyles. The U.K. stands out among developed countries in the fintech industry. Since the global financial crisis of 2008, fintech companies have started their business in London, and a massive amount of money has been injected into those firms. As a result, there are 1,800 companies in the city as of 2014.

Even China continues to expand the fintech industry based on its massive market, a large number of mobile phone Internet users, and the Chinese government's support for the sector.

In contrast, Korea doesn't compare. The report said, “Most of all, the market environment is not good to start a business in the fintech industry. In particular, it will be difficult to improve the start-up culture in the short term.” In general, a significant amount of investment and manpower is needed to start a business in the fintech area, but there are no venture capital firms specializing in this sector. Moreover, talented people tend to avoid establishing a company these days.

In addition, the organizational structure of local financial institutions is cited as one of the many problems. Fintech start-ups need a close partnership with credit card companies and banks. In fact, mainly large banks in other countries

invest in the introduction of new technologies or promising fintech start-ups. However, Korea is unable to catch up with this trend.

Finally, the regulations and a deep distrust of support for the promotion of the fintech industry by the government are also named as barriers to growing the sector.

Regulations to be Eliminated

Meanwhile, the Korean government is relaxing regulations on fintech in hopes that it will create economic benefits and become part of the convergence industry. Given the quick move of the U.S. and Japan to dominate the promising future industry, the government could not delay relaxing its regulations any longer.

Under the circumstances, the Financial Services Commission (FSC) has decided to nurture the financial technology (fintech) industry this year as one of its major priorities.

Now, financial authorities are coming up with measures to foster the fintech sector through a consultation body of IT and finance industries. The country's top financial regulator established the consultation body on Nov. 10 last year, holding the first meeting. In addition to officials at the FSC and the Financial Supervisory Service (FSS), representatives of Samsung Electronics, Daum Kakao, KT, LG CNS, Korea Cyber Payment, eBay Korea, SK Planet, Hana Bank, Mirae Asset Securities, Shinhan Card, AhnLab, INCA Internet, the Bank of Korea, the Korea Financial Telecommunications & Clearings Institute, the Korea Development Institute, and the Financial Security Agency also



participated in the event.

“At present, the domestic fintech industry is lopsided to cash remittances and payments, but we need to expand the scope to cover promising fields such as big data analysis and digital loan qualification,” the FSS governor Zhin Woong-seob said at a forum of the consultation body on Jan. 21. He added, “The FSS will keep abolishing unnecessary regulations so that fintech firms can have better access to the financial market.”

Remaining Tasks for Active Investment

Financial companies' investments in fintech companies will be allowed starting next month. Still, the issue of the classification of fintech companies remains to be handled.

In fact, this type of investment has already been allowed, according to the relevant law. However, the lack of related cases and the ambiguity of the classification have acted as hurdles. Under the circumstances, the FSC will clarify the boundary by the end of next month. The e-Finance, financial data analysis, and financial software development businesses are expected to be included in the category.

Nevertheless, the classification is no easy matter. When it comes to e-finance, a total of 68 companies are registered as of Jan. 7 this year. Some of them are committed to fintech, but others are doing multiple businesses. The 68 also includes large IT companies such as Naver, Daum Kakao, LG U+, LG CNS, CJ Systems, and SK Planet. This means the classification

has to be detailed. A broad classification could result in financial companies' acquisition of general IT firms or investment for funding purposes. The effect of the permission is likely to shrink if excessively strict restrictions are applied.

IT Companies Taking Fintech Initiatives

Under the circumstances, IT enterprises are reportedly leading patent applications related to mobile payments, one of the major elements in fintech.

The number of patents filed by banks and credit card companies for mobile payments is smaller than that of IT companies like SK Telecom and LG Electronics. Hence, IT firms are likely to lead the fintech market.

According to a report on current trends in patent applications for the fintech industry released by the Korea Intellectual Property Office on March 4, banks and credit card companies each represent 4 percent (189 cases) and 1 percent (63 cases) of 4314 patent applications related to mobile payments by November 2014.

In contrast, IT service providers comprised the largest proportion of the total, with 1,411 cases (33 percent). The number of patents filed by individuals was 910 cases (21 percent), online payment service providers 680 cases (16 percent), handset makers 500 cases (12 percent), and mobile carriers 355 cases (8 percent).


In particular, Samsung Electronics is pushing into the fintech market in which

Google and Apple are already fiercely competing. Samsung is going to introduce its mobile payment system Samsung Pay to the local market in the latter half of this year.

Korean mobile carriers are also reforming and advancing their services, such as mobile payments, while working on an increasing number of new fintech technologies and products.

SK Telecom is planning to commercialize BLE payment and BLE e-card services making use of Bluetooth Low Power. The former will allow customers to make a payment by just putting a smartphone next to a POS and typing in a password, and the latter is for multiple plastic cards to be incorporated into a single e-card.

KT is working on various e-payment services, too. It launched PayOn Plus and TapSign late last year in this context. TapSign, co-developed by KT and BC Card, allows immediate user identification and payment when a credit card is brought into contact with a smartphone. The company is expecting that TapSign will boost its share in the mobile shopping payment platform market.

LG U+ has released the smartphone-based payment service PayNow to commercial use ahead of the other two. It continues to provide payments within three seconds, without any Active X or public certificates, once payment information is registered. The company is going to add coupon and complex payment functions to the service as well. 

Forcing Choices

China Putting Pressure on Korea about AIIB, THAAD Issues



Deputy Foreign Minister for Political Affairs Lee Kyung-soo (right) and Chinese Assistant Foreign Minister Liu Jianchao (left) speak together in Seoul on March 16.

Chinese Assistant Foreign Minister Liu Jianchao said at a press conference on March 16 that China is hoping to see the Korean and U.S. governments make an appropriate decision on the deployment of THAAD in the Korean peninsula. The Korean Foreign Affairs Ministry explained that THAAD was not an official agenda item of his meeting with Deputy Foreign Minister for Political Affairs Lee Kyung-soo, and that the decision is up to Korea.

The Chinese Assistant Foreign Minister also said that he asked again for Korea's participation in the China-led Asia Infrastructure Investment Bank (AIIB). "Korea's Deputy Foreign Minister for Political Affairs answered that the Korean government would decide on the matter in view of the economic advantages and disadvantages of becoming a founding member of the AIIB," he mentioned.

Amid the confrontation of the U.S.-led TPP economic blockade with the China-led CERP, the G2 are battling in South Korea over the latter's joining the China-

led Asian Infrastructure Investment Bank (AIIB) as a founding member, which counters the Asian Development Bank (ADB) led by the U.S. and Japan. At present, the Korean government is considering accession to the AIIB to be inevitable from the economic perspective. However, the United States has been negative about Korea's accession for such reasons as the lack of transparency of the governance structure. Korea has to sign an MOU within this month if it is to become a founding member.


During the approximately two hour meeting with his counterpart Lee Kyung-soo that day, Liu reportedly spent only five minutes talking about the THAAD issue, an anti-ballistic missile system developed by the U.S. military, by blurring it out at the end of the talks. It means that he tried just to put the missile deployment issue officially on the table, intending to avoid a deep debate right away with a South Korean government that has been sticking to strategic ambiguity with its stance of "3 Nos" -- No Requests, No

Consultations, and No Decisions.

In the meantime, U.S. Assistant Secretary of State for East Asian and Pacific Affairs Daniel Russel told reporters on March 17, a day after he arrived in the country, that Washington wondered why a third party is opposed so strongly to a security system that has not been discussed yet and is just a theory. He said that it is just South Korea that should make a decision on what measures to take under the Korea-U.S. alliance.

Prior to Russel's remarks that day, Seoul's Defense Ministry spokesman Kim Min-seok said that neighbors can have their own positions on any security issue, like the possible deployment of the THAAD system by U.S. Forces Korea under the Korea-U.S. alliance system, but they should not try to influence South Korea's security policy. He added that South Korea will make a decision based upon its own judgment after putting security interests before anything else, if the U.S. government asks for a consultation.

Meanwhile, China's foreign ministry spokesman Hong Lei restated at a regular press briefing on the same day that China's position on the anti-missile issue is consistent and clear. He added that countries must neither pursue their own security interests at the expense of others', nor undermine regional peace and stability.

South Korea is now becoming a theater where the expansion of Chinese power crashes outright with the riposte of the U.S. in Northeast Asia. Consequently, it is drawing attentions on how Seoul will respond to the growing pressures from the two powers. 

by Cho Jin-young

Unexpected Assault

Pro-North Korea Activist Assaults US Ambassador

Mark Lippert, U.S. Ambassador to South Korea, was assaulted by political activist Kim Ki-Jong wielding a razor blade at approximately 7:40am on March 5 at a breakfast lecture organized by the Korean Council for Reconciliation and Cooperation at the Sejong Center, just across the street from the U.S. embassy in Gwangwhamun, central Seoul.

Ambassador Lippert was seen holding the right side of his face while he was rushed to Kangbuk Samsung Medical Center to be treated for wounds to his face and arm. An Obama Administration official said that his injuries were not life-threatening.

YTN TV reported that the attacker, Kim Ji-jong, yelled that "South and North Korea should be reunified" during the attack. Video footage shows him being wrestled to the ground following his assault. He was dressed in a modern version of traditional Korean hanbok. He continued to scream anti-war and anti-military exercise slogans while being subdued. He was presumably talking about the annual Key Resolve and Foal Eagle military exercises that started Monday in the country.

The attacker is a well-known political activist in his 50s with a suspended 2-year jail sentence for throwing concrete at the Japanese ambassador to Korea in 2010.

Mark Lippert, 42, came as ambassador to South Korea last year. Before his appointment he was the U.S. Assistant Secretary of Defense for Asian affairs. His wife gave birth in South Korea recently and their son has a Korean middle name.

The U.S. State Department issued a statement saying, "We strongly condemn



Just after Kim Ki-jong attacked U.S. ambassador to South Korea Mark Lippert, he screams, "I have committed a terrorist act today to prevent a war, targeting the annual Key Resolve-Foal Eagle military exercises between South Korea and the U.S."

this act of violence." President Obama called Ambassador Lippert to tell him that "he and his wife Robyn are in his thoughts and prayers, and to wish him the very best for a speedy recovery," according to National Security Council spokesperson Bernadette Meehan.

President Park visited injured U.S. Ambassador Mark Lippert on March 9, immediately after returning to the country from her four nation Middle East tour. Lippert is recovering at Seoul's Severance Hospital, where President Park also received treatment after a similar attack in 2006. She was knifed by a man with a box cutter during an election rally.

"As I experienced a similar attack, my heart is aching more for your suffering," Park told Lippert during the 10 minute meeting. She added that both Koreans and Americans were greatly impressed by his dignity and composure in handling the incident.

Lippert told Park that he and his wife have been moved by the Korean government and people's warm support, and that he'll do his best to further strengthen bilateral relations. According to the hospital,

Lippert has been recovering faster than expected and could be released by Tuesday afternoon.

Along with the call to Lippert from Abu Dhabi after the attack on March 5, Park pledged a thorough investigation. She condemned the act, saying, "It is appalling and unimaginable that the U.S. ambassador fell victim to an act of terror in broad daylight in Korea."

High-level government officials and politicians continued their visits to Lippert after his surgery. Despite the unprecedented attack on the envoy, the Korea-US alliance seems strong, amid an outpouring of public sympathy and the support of many Koreans. Hospital officials have said that they have been very confused by the large number of Korean citizens who have called, volunteering to pay for the Ambassador's medical expenses. Many others have found out that Mark Lippert's home state is Ohio, and Ohio's state flower is the carnation. So many Korean people have piled up carnations for him in front of the U.S. Embassy alongside signs that say, "I am Lippert" in both English and Korean.

by Mary Park

Korea-China FTA

Korea-China FTA Provisionally Concluded with Several Concessions



The Korea-China FTA was provisionally signed on Feb. 25. It includes some concessions regarding major export items in the manufacturing sector for the protection of primary industries, and preferential tariffs for a number of products produced in the Kaesong Industrial Complex. The wages paid in the industrial complex are excluded from the value of non-originating materials, and the Committee on Outward Processing Zones on the Korean Peninsula is set up to provide against the possibility of another Kaesong Industrial Complex.

"The Korea-China FTA is more beneficial than other FTAs in many aspects," the Ministry of Trade, Industry & Energy commented, adding, "For example, the preferential tariffs are put into force upon the agreement taking effect, and no less than 310 items are subject to preferential tariffs."

In the manufacturing sector, China made a concession in cold rolled plates, hot rolled stainless steel sheets, universal thick plates, and the like, while Korea applied a long-term concession to ferroalloys such as ferromanganese and excluded cast-iron pipe from the agreement. In the petrochemical sector, China is allowed to have a preferential opportunity with regard to high value-added products like ion exchange resin, super-absorbent resin, and polyurethane in view of the bilateral trade situation of Korea's export to China being more than 13 times China's export to Korea. However, items sensitive to Korean small firms such as ethyl acetate

are to remain protected.

In the textile industry, the Chinese market has almost completely opened, including knitted goods, functional clothes, and baby clothes, and the tariffs on items sensitive for Korea such as cotton fabrics and pure cotton yarn are to be maintained or partially reduced. China will also open market segments such as washing machines, refrigerators, medical instruments, electric rice cookers, and electronics components.

Korea will not eliminate the tariffs on heavy electric equipment like electric motors and transformers for the time being.

For communications services and equipment, China included the communications area as a separate chapter for the first time. It guarantees that Korean and Chinese companies engaged in communications businesses can compete fairly in the other country. An official at the Ministry of Trade, Industry and Energy said, "The Korea-China FTA ensures that communications service providers can access and use public communications networks in the other country in fair, reasonable, and non-discriminatory manners."

It is, however, not easy for telecommunications service providers to enter overseas markets, and it is not because of government regulations. Rather, it is due to the fact that a massive amount of investment in infrastructure for more than 10 years are necessary. Therefore, experts are saying that fair competition guaranteed by the

Korea-China FTA has no special meaning.

Many in the communications equipment industry predict that the deal will not bring about a big change in the market. Sixty-three countries including Korea, the U.S., and Japan already finalized the Information Technology Agreement in 1996 that requires participants to eliminate their tariffs on a specific list of IT and telecommunications products, which include mobile phones and wireless communications equipment. China became a signatory in 1999. That is, there are already no tariffs on those products.

Primary industries are what the Korean government paid the greatest attention to. Rice was excluded from the negotiations from the get go, and was joined by 548 other food items including pork, apples, pears, beef, chili, garlic, and tangerines. These foodstuffs account for about one-third of the agricultural and livestock products that Korea produces, and are not going to be subject to tariff elimination. Meanwhile, China is scheduled to eliminate tariffs on 91 percent of farm produce. Korea's 20 major fishery products like seaweed, mackerel, abalone, squid, and anchovies are put on the highly-sensitive list without exception.

In service and investment, negative rules are adopted for the opening of legal, construction, and distribution services. This is meaningful in that China has adopted no negative rules concerning the service industry in any other FTAs. 

by Cho Jin-young

KNZ FTA

New Zealand Now South Korea's 13th Free Trade Partner

South Korea and New Zealand formally signed a free trade agreement (FTA) on March 23.

New Zealand is South Korea's 40th largest trading partner, while Korea is currently New Zealand's 6th largest export market. Bilateral trade between the two countries totaled US\$3.26 billion in 2014, with South Korea's exports to New Zealand amounting to US\$1.73 billion.

At the signing ceremony President Park Geun-hye described the agreement as a milestone for upgraded bilateral cooperation in various areas, including economy, culture, manpower, security, information and communication, and international cooperation. New Zealand Prime Minister John Key also praised the agreement for its economic openness and potential for New Zealand's further market integration into the Asia-Pacific region.

Under the agreement, New Zealand will remove tariffs on all South Korean goods seven years after the implementation. South Korea will reciprocate by abolishing tariffs on 96.4 percent of shipments from New Zealand within 15 years of when the pact takes effect. South Korea, New Zealand's third-largest beef export market, will scrap the 40 percent tariff levied on its beef within 15 years and the 45 percent tariff on kiwis within six years.

Both sides have agreed to immediately lift tariffs on washing machines. Tariffs on cars (5 to 12.5 percent), construction machinery (5 percent) and trucks (5 percent) will be eliminated over the next three years.

However, they agreed to exclude some 199 items that are considered very sensitive in Korea from the negotiations, mostly agricultural goods. They include



John Key (left), prime minister of New Zealand, speaks with Park Geun-hye, president of South Korea, at the Blue House before signing the Korea-New Zealand Free Trade Agreement on March 23.


rice, a key staple in Korea, honey, apples, pears, persimmons, chili pepper, garlic, and squid.

Meanwhile, the deal is to expand human exchanges in agriculture, livestock, and Oriental medicine. According to the Blue House, by expanding exchange programs the possible imbalances in the agreement will be ameliorated. New Zealand will offer an extended working holiday program by issuing 3,000 working holiday visas per year up from the current 1,800 for Korean youths age from 18 to 30. It will also give work visas to 200 Korean experts in the field of farming, fisheries, and forestry industries including traditional herbal doctors and bio-technicians with training and research opportunities in New Zealand. Moreover, an eight-week language program will be offered for 150 Korean students from farming and fishing villages. By strengthening co-operation, the two sides will seek new opportunities, making inroads into emerging markets.

At the summit, the two leaders agreed to build an institutional framework for

bilateral cooperation in the maritime industry, weapon systems, information technology, and health care. Especially in maritime affairs, Park requested Key to help Korean fishing fleets, including trawlers, continue their operations in NZ's exclusive economic zone.

Park also asked Key to support Korea in the Trans-Pacific Partnership (TPP), the Washington-led regional free trade agreement. The TPP, currently involving 11 other countries is expected to create one of the world's largest economic blocs when it is contracted. Key answered Park by saying that New Zealand will keep South Korea informed on the progress of the TPP negotiations.

Since Seoul and Wellington began talks on the free trade pact in 2009, the two sides have gone through difficulties in narrowing down the differences to complete negotiations. The formal signing has come about after the 2014 G20 summit held in Australia. Now the deal waits for parliamentary ratification in both countries to be implemented. 

by Mary Park

Careful Conservation

Finding the Balance between Preservation and Use

by Mary Park

Business Korea was able to sit down with Shin Won-sop, minister of the Korea Forest Service, to speak about his work to preserve and grow Korea's natural forest resources. After the Korean War in the 1950s, Korea's natural forests were devastated, but they now cover 64 percent of the country. The Korea Forest Service under Shin Won-sop's leadership is working to balance the creation of wind farms and new construction projects with the needs of the country's forests, and to deal with the issues of the preservation of forest-grown ginseng, and other issues. He speaks more about these topics in the interview excerpts that follow.



Shin Won-sop, Minister of the Korea Forest Service.

What is the outcome of last year's policy of the Korea Forest Service?

Last year, the Korea Forest Service focused on how to make strategic use of free trade agreements. For example, it came up with item-specific plans for protecting domestic forest products to provide against the opening of the market to follow the implementation of free trade deals.

At the same time, it expanded forest-based welfare infrastructure such as recreational forests to better meet public demand, while providing customized services to contribute to social welfare.

Unfortunately though, the quality of pine wilt disease prevention was reduced to some extent, even though we succeeded in covering the entire territory last year. This year, however, we will launch projects to improve the quality of the preventative measures.

The Korea Forest Service achieved good results in the evaluation by the central government last year.

In the assessment, we took the top spot among the 21 vice ministerial agencies based on our policy of deregulation, the expansion of forest-based welfare services and infrastructure such as urban forests and school forests, and increased investment in preserved mountain districts. In addition, we succeeded in reduc-

ing illegal acts like the appropriation of mountain areas, and the government acknowledged the effectiveness of our policy promotion and efforts for improving administrative efficiency.

What are specific examples of the deregulation policy?

We relaxed the area regulations for wind power generation facilities to 100,000 m² for investment promotion, and prepared new access road installation guidelines. Approximately 150 to 225 billion won [US\$136 to \$204 million] of additional investment is expected in case the wind farm development projects are resumed in Taebaek, Euiyeong, Yangsan, etc.

Also, we eliminated redundant regulations regarding the Management of Mountainous Districts Act and the National Land Planning and Use Act. This is expected to help attract more investment in the privately-financed development project in the vicinity of the Yangyang International Airport in Gangwon Province. We are currently estimating that increase will reach 66.5 billion won [US\$60.4 million] with 400 new jobs created.

The final age regulations have been relaxed after 49 years in view of the revitalization of the domestic wood supply and market demand. The regulations for oak have been halved to 25 years, which is expected to lead to a 4.7-fold increase in the income of the forest businesses.

Please talk about the background and effect of the Forest Welfare Act.

Sixty-four percent of the territory of Korea is forest lands, and these abundant forest resources should be better utilized in terms of forest welfare for cultural, leisure, and educational purposes. Based on the Forest Welfare Act, the Korea Forest Service will provide life cycle welfare services for the entire population to contribute to higher health and living standards.

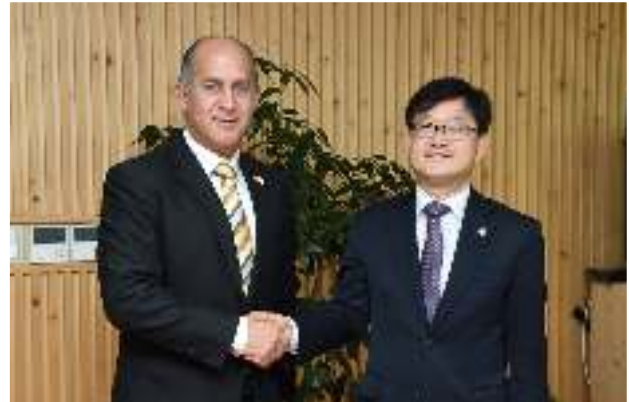
According to the act, forest welfare is a broad concept covering forest culture, leisure, education, healing, etc. Standard models regarding forest welfare complexes will be provided, along with public welfare services for the low-income class to supplement the roles of local governments and private organizations.

What is the Korea Forest Service's plan for the establishment of medicinal crop production bases?

At present, we are concentrating income assistance on 10 out of 79 types of forest products. We are sure that medicinal crops with unique and various remedial effects will make highly promising business items. There are 1,253 types of medicinal



Minister of the Korea Forest Service met Canadian Trade Minister to talk about possible ways for overseas forestry cooperation.



Minister of the Korea Forest Service talks with Ecuadorian ambassador for overseas forestry cooperation.



Korea-China MOU to cooperate in Forest Welfare.

crops, and the Korea Forest Service is managing 38 of them. The crops are used in cosmetics, beverages, functional food, medicine, and the like, and the production added up to 493.8 billion won [US\$448.3 million] in 2013.

We are going to increase the number of dedicated cultivation areas, each having an area of at least 5 ha, from 30 to 80 between this year and 2018, so the commercialization of the crops can be accelerated. A promotion center for wood-cultivated ginseng and medicinal herbs will be opened in July this year before the establishment of a medicinal herb research center scheduled for June next year. We have also moved ahead with various measures concerning production base establishment, processing and distribution improvement, and R&D since November 2014, based on our strategy for better use of medicinal crops.

How is the agency seeking the balance between the preservation and use of forest resources?

The answer lies in shifting the paradigm of the use of mountain areas. We are working on more elastic systems for the use of the lands out of the dichotomy of development vs. preservation.

In the past, all of the trees in a mountain area used to be cut to build high-rise buildings on a flat land. This used to lead to the impairment of the view as well as the forest, which, in turn, brought stricter regulations for preventing the side effects. We are going to prepare ecological mountain area utilization systems instead so such areas can be preserved to the maximum extent,

and low-rise buildings and wooden houses giving no damage to the landscape can take the place of high-rise structures.

Also, our Basic Plan for Mountain Area Management established in view of regional characteristics will make the use of mountain districts more systematic and well-planned.


What efforts are the agency making for overseas mountain resources development and contribution to the international community?

Our overseas resources development projects are underway for the purpose of stably procuring forest resources from abroad with Korea's self-sufficiency remaining at a low level. At present, about 30 Korean companies are engaged in forestation projects in 330,000 ha areas located in Southeast Asia, Latin America, Australia, etc.

Korea is regarded as one of the few countries that achieved both territory greening and economic development within a very short period of time. International cooperation in the field of forestry is one of the specialties Korea can share with developing countries to help raise their living standards and accelerate their economic growth.

These days, the importance of forests is on the rise worldwide as a viable option against climate change. A number of developing countries have asked for our assistance since the 10th United Nations Convention to Combat Desertification (UNCCD) conference in Changwon in 2011.

We are currently engaged in greening projects in Africa, Latin America, Central Asia, and many more in cooperation with international organizations such as the Food and Agriculture Organization (FAO) of the U.N. In addition, we will expand our participation in the Reducing Emissions from Deforestation and forest Degradation (REDD+) in Indonesia and Cambodia while training more forestation experts and setting up more ecological forests in various developing countries.

We signed cooperation agreements with ASEAN member countries for collaboration in various ways. The cooperation scheme will cover not just Southeast Asia but the other regions, including Central Asia, over time. We hope Korea, based on this endeavor, remains as the exemplary model of green. 

Artisanal Self-governance

Growth of a City Led by Citizens and Artisans Versed in Pottery

by Mary Park



Icheon City is growing at a fast pace. The double-track railway section to and from Seongnam, Icheon, and Yeosu will open in the first half of next year, and the construction of the motorway between Seongnam and Janghewon is going on as scheduled. In addition, SK Hynix is expanding its manufacturing facilities in the region to invigorate the regional economy. Icheon City Mayor Cho Byeong-don, who is serving his third term, is at the center of these positive changes. Business-Korea asked him about them.

How is SK Hynix contributing to the revitalization of the regional economy?

The facility expansion kicked off in late Dec. 2013. A total of 15 trillion won [US\$13.6 billion] is slated to be invested in the project to reach 55 trillion won [US\$49.8 billion] in production inducement, 18 trillion won [US\$16.3 billion] in added value creation, and 210,000 jobs to be created for seven years to come. The company is aiming to become the world's number one semiconductor manufacturer, recording 30 trillion won [US\$27.1 billion] in annual sales by 2021, based on an annual growth rate of at least 10 percent.

How is Icheon preparing for this year's ceramic festival?

The Icheon Ceramic Festival, celebrating its 29th anniversary this year, takes place from April 24 to May 17 at the Seolbong Park in tandem with the Gyeonggi International Ceramic Biennale.

Icheon is a city of leisure and tourism less than an hour's drive away from Seoul, and its ceramic festival has provided various fun things to see and experience while contributing greatly to the ceramics industry of Korea. The festival is led by citizens and artisans versed in pottery, whereas most local festivals in Korea are led by local governments. I believe this reflects how loyal Icheon is to the essence of local self-governance.

What is the background of the establishment of the Icheon Ceramics Village, and what are you expecting from it?

The village, scheduled to be completed next year, constitutes a large-scale project covering 400,000 m² of land and taking a budget of 32.3 billion won [US\$29.2 million]. Traditionally, Icheon has represented the ceramic art of Korea, and it is currently home to the office of the Korea Institute of Ceramics Engineering and Technology, the Korea Ceramic Foundation, and the Korea Ceramic Art High School. The Icheon Ceramics Village will inherit the precious legacy and accelerate the growth of our city based on it.

A number of related companies are to come to Icheon once the village is opened next year. Then, the production, sale, and experience of pottery will be available at the single site to attract more tourists, maybe 10 million a year. I will turn the ceramic industry of my city into one of the

cultural elements representing Korea.

How is Icheon internationalizing itself at this moment?

On July 20, 2010, Icheon was designated as Korea's first UNESCO Creative City in crafts and folk art. This has made a great contribution to our brand value and international standing. So, we can take a leading role in global development based on inter-city cooperation, while standing on par with cultural leaders in international conferences like the UNESCO Creative Cities Network Conference and the World Agritourism Development Forum.

We are currently strengthening our cooperation with ceramic industry leaders like Limoges, France and Faenza, Italy. A sister city agreement with Santa Fe was signed, and a similar agreement will be signed in April this year. Also, Icheon ranked second among 94 cities in the central government's evaluation of local government globalization between July 2010 and 2013.

Unemployment is posing a significant challenge these days. What is the current status and policy of Icheon City regarding this matter?

Icheon recorded an employment rate of 64.4 percent in the second half of 2014, higher than Korea's overall employment rate of 60.9 percent and Gyeonggi Province's 62.0 percent. In particular, Icheon recorded the highest employment rate in the province. The unemployment rates of the country and the province were 3.2 percent and 2.9 percent at the end of 2014, respectively. Meanwhile, Icheon's stood at 1.8 percent.

Icheon City has run job placement centers to provide customized consulting



29th Icheon Ceramic Festival.



Icheon Job Fair.



Education in Icheon.



Efforts for city's globalization.

for women, youth, and senior citizens. Four professional job consultants are working at the center with three public employees. They helped approximately 4,200 job seekers find jobs last year, when about 9,600 people were registered at the center for the purpose.

Icheon is planning to house industrial complexes. What is the current status?

At present, the entire city is a nature conservation zone, which means any individual factory located in the city cannot have a manufacturing facility area of 1,000 m² or more.

However, the regulation is not applied to industrial complexes with an area of up to 60,000 m². Also, acquisition and registration taxes are not imposed, the property tax is cut by 35 percent, the building coverage ratio regulation is relaxed to 80 percent, and the floor area ratio regulation to 350 percent for those purchasing industrial land and setting up new buildings. We have focused on this point in attracting small-scale industrial complexes in the interest of regional development.


Three complexes have started their operations up to now, and six have won approval. Joint development projects with

the Korea Industrial Complex Corporation are planned as well.

What is your plan for tourism infrastructure development?

Hands-on experience is the key concept of the tourism policy of Icheon, and we are now concentrating on agricultural experience. We set up the corporation of Icheon Farming Village Outing in 2010, and now 38 villages are associated with it to provide hands-on tourism. We have

cooperated with 10 organizations as well for hands-on art, culture, and spa experiences.

As a result, we could attract more than 200,000 tourists last year via the projects led by the villages. The combined sales added up to 3 billion won [US\$2.7 million], too. This year, we will increase the number of the hands-on items to at least 100 from 60, while expanding the scope from farming village tour to pottery, culture, sports, leisure, etc. 



Incheon Port Authority

New Incheon Port Secures Direct Ocean Route to American, European Continents



In June, Incheon New Port will open at Incheon Port, serving as the gateway to Seoul and the metropolitan area. In the new port, large vessels will be able to freely enter and leave the ocean.

Until now, Incheon Port has had a greater percentage of maritime transport services within the North China and Southeast Asia regions. Once it becomes operational, however, the port will open the way to directly transport goods with

large container ships to Europe and the American continent in the future.

Before the opening of the new port, BusinessKorea had an interview with Incheon Port Authority (IPA) President Yoo Chang-keun, who focused on the marketing at home and abroad in order to attract new shipping companies and vessel fleets.

A new logistics channel will be

opened soon. Could you tell us the details about it?

Once the new port is opened, vessels with 4,000 to 8,000 TEU can freely enter and depart. The companies with shippers and ships, which have business partners in the metropolitan area, can choose a better logistics channel than the existing services in Korea in terms of time and cost.

Currently, container vessels with 4,000 to 8,000 TEU will be able to enter and



depart on a regular basis. Also, vessels with up to 12,000 TEU can operate through the Datum Level-16m project by 2018.

How are conditions of the dock, unloading equipment, and back-ground land?

First of all, two terminals with docks of 800 meters and a linear length of 1.6 kilometers will be opened. Terminal B, which will open first this year, introduced five RMQC with 22 rows and will introduce two more of them with 25 additional rows.

The port also introduced 12 yard cranes with a capacity of 5 tiers and 9 rows, and 12 more will be introduced in the future. The terminal has an open air storage yard that is 600 meters wide from the quay wall to the end of the terminal.

The terminal covers a total 145,000m² of area. Terminal A, which is of the same size, will open at the beginning of 2016, and the equipment will also be nearly identical.

Is it possible to secure enough shipping quantity?

Since the port is located near the metropolitan area and has other major ports and service networks nearby in the north-east coast, which leads China's economic growth, it is fully possible.

The global G6 alliance decided to establish a regular container route called

the Central China 1 Service, which stretches from the U.S. to Incheon and then to North China. It will pass through Terminal B, which will be open in June.

Is there anything you'd like to say to global shipping companies and shippers?

When you use the New Incheon Port, you will save up to 4 kilometers in shipping service distance than if you use the existing shipping companies to enter Incheon Port. Therefore, it is cost effective in terms of fuel.

Also, you can save time in unloading containers by using the new container cranes with 25 rows. Also, the new port will be an attractive alternative for cargo transport from the point of view of shippers, since it can considerably reduce the cost of transport than the existing route, which transports goods from the port of the southern part of Korea to the metropolitan area by truck.

What are your plans for your 10th anniversary this year?

Vision 2030 is to set a developmental strategy and to form key values. We are also planning a road map to build a sustainable development strategy looking to the future, analyzing business conditions.

We will create methods to achieve a future map for Incheon Port and Incheon Port Corporation. All principal agents of

the IPA and Incheon Port Corporation will share one vision and the same strategy.

Tell us about the specialty and comparative advantage of Incheon's newly-established port.

First of all, we have geographic efficiency. From Incheon Port one can reach metropolitan Seoul within an hour, while also facing China, the world's largest market. And it is close to Incheon International Airport.

With the improved logistics of the new port, we are located in deeper waters (-14m at present, and -16m by 2018), and have built cutting-edge facilities making efficient use of a wide open-air storage yard. We expect vast improvements in our distribution system.

Compared to before, we have also shortened the shipping service distance, which will

What is the significance of the cooperation with the world's second largest G6 alliance?

The G6 alliance member companies will deploy container ships with 6,800 TEU and provide one service each week.

The course service, which passes the west coast of the U.S., Busan, Incheon to Qingdao and Shanghai in China, will enrich the Incheon port to be a global port through the increase of shipping traffic and transshipment cargo.

Lastly, how do you predict port traffic this year?

As of February, the container traffic in Incheon Port recorded 361,666 TEU, a 10.4 percent increase over the same period a year earlier. Thanks to the opening of the new port, the container traffic goal this year will be 2,600,000 TEU, which is higher than the forecast 2,500,000 TEU.

Urgent Deregulation

Ifez Needs Urgent Measures to be Deregulations Test Bed



Songdo International City in the Incheon Free Economic Zone.



Yoo Jeong-bok, Mayor of Incheon Metropolitan City.



by Jung Suk-ye

Japan and China are expanding their national strategy and free trade zones for economic deregulation and differentiation. Meanwhile, the Incheon Free Economic Zone (IFEZ) Authority is continuing to fail to designate its deregulation test district due to the lack of communication and consensus.

The Japanese government has recently designated Tokyo, Osaka Prefecture and City, and Aichi Prefecture as national strategy zones. The purpose is to attract more foreign investment and boost business activities in Japan based on a new deregulation policy, so that these zones can accelerate national economic growth in the long term.

The national strategy zones are different from existing economic districts in three aspects: support measures, selection of the regions, and role of the central government in the zones. Specifically, the support measures applied to the national strategy zones are much broader and more comprehensive, covering taxation, financing, and many other fields as well as those for deregulation. Also, assistance is concentrated on the three regions instead of multiple scattered ones. Also, the Prime

Minister is slated to exert his leadership in the zones so as to expedite a fundamental reform free from the conflicting interests of different government arms.

The Chinese government is expanding the Shanghai Free Trade Zone to Tianjin, Guangdong, Fujian, and the like. Nationwide expansion implies its second overall economic reform and greater efforts to attract foreign investment. Measures similar to those implemented in Shanghai are expected to be used in the development zones and industrial complexes in the regions so that its reform can be in progress in view of the regional characteristics.


Meanwhile, the Chinese government is going to reduce the negative list of the items that corporations are inhibited from investing in, while easing restrictions to open up the service and manufacturing industries to a greater extent.

Designation of Deregulation Test District Urgently Needed

Accounting for 0.2 percent of Korea's territory and 0.4 percent of its population, the IFEZ is considered to be the optimal

testbed for deregulation and the Creative Economy. Now is the time for the Korean government to strategically distribute national resources and make policy decisions as to its viability in view of the geographical advantages of the IFEZ and its 10-year performance in investment attraction and development.

Regulations on various business factors such as employment should be examined from scratch if the IFEZ is to attract more investment and develop itself at a faster pace. Also, business infrastructure covering customs clearance and immigration control will have to be improved along with the assistance of day-to-day corporate activities.

"The revision to the Special Act on Designation and Management of Free Economic Zones, which was tabled last year with regard to the designation of the deregulation test district, is still pending in the Trade, Industry and Energy Committee of the National Assembly," said an executive member at the IFEZ Authority, adding, "However, discussions and determinations will have to be made as soon as possible, with Japan and China moving nimbly and pro-actively." 



An artist's depiction of a growing middle eastern city.

Far East to Middle East

President Park Throws Net Deep into Middle East

by Mary Park

On March 3 (local time), South Korea's President Park Geun-hye had a summit with Kuwaiti King Sheikh Sabah Al-Ahmad Al-Sabah in his kingdom, the first stop on her four-nation Middle East tour.

The Gulf nations are seeking to diversify their oil-centered business portfolio to prepare for the post-oil era. Korea has recognized the importance of this growing market by sending its largest-ever business delegation, comprised of 116 representatives of public and private firms.

The Middle East is developing into an attractive business destination not only for energy and construction companies, but also for information technology, medical services, and renewable energy.

"There's all this talk about another

boom in the Middle East. We have strong ties with the region. There are more areas than ever where our companies can cooperate with the Gulf Cooperation Council (GCC) countries in the Middle East," said President Park after her arrival in Kuwait.

The GCC is a regional intergovernmental political and economic union consisting of 6 countries such as Saudi Arabia, the United Arab Emirates (UAE), Qatar, Kuwait, Oman, and Bahrain. It accounts for 33.6 percent of the world's crude oil reserves.

It also accounts for 23.5 percent of the world's oil production, ranking first. Based on oil money, the per capita GDPs of all 6 countries surpass US\$40,000 (43.99 million won) as of 2013. Particularly, Qatar is the richest country in the

world with a GDP per capita of more than US\$140,000 (153.96 million).

As of last year, the GCC took up only 3.5 percent of Korea's exports. However, it is the main export market, accounting for 11.5 percent of automobile exports, 39.1 percent of cigarettes, and 30.3 percent of air conditioners. It also has large portions, with 15.2 percent in the chemical machinery sector, 21 percent in valves, 39.6 percent in circuit breakers, and 21.8 percent in steel.

About 39.8 percent of the construction and plants projects from abroad that Korean companies have won are in the GCC. The GCC makes up 71.9 percent of oil imports and 49.3 percent of natural gas imports. In the commodity market, the annual export duties of Korea to the GCC

amounts to US\$1.11 billion (1.22 trillion won).

Sales Diplomacy Starting from Kuwait

Living up to her expectations, Korean companies sealed nine memoranda of understanding (MOUs) in the summit with Kuwait to invite oil money to fuel South Korea's slowing economy.

Kuwait's Petrochemical Industries Company (PIC) promised SK Gas 80 billion won (US\$72 million) in investment money, and Kuwait's Industrial Bank will join hands with the Korea-GCC Economic Cooperation Fund to establish a BOPP film plant worth US\$100 million.

The summit aided Korean firms in winning construction deals worth a total of US\$38.1 billion. It includes US\$7.8 billion of oil-refining plant construction, US\$22 billion in Kuwaiti metro construction, a US\$1.8 billion railway network project, a US\$1.5 billion Umm Al Hayman wastewater treatment plant construction project, and a US\$5 billion new city construction project.

Before these achievements, Hyundai Engineering & Construction and GS E&C won the largest civil project in the Middle East, the Jaber Bridge Project worth 3 trillion won (US\$2.7 billion). Jaber Bridge is now under construction, and when completed in 2018 will be the world's largest marine bridge at 48 km.

Saudi Chose Korea for Future Energy Cooperation

President Park Geun-hye held a bilateral summit with Salman bin Abdulaziz Al Saud, the king of Saudi Arabia, on March 3.

The two heads appreciated the necessity to strengthen their bilateral partnership to progress into broader fields of mutual prosperity.

During the meeting with Saudi business leaders, President Park emphasized the importance of nuclear and renewable energy. She urged both sides to initiate joint ventures to develop different types of new energy for future energy supplies.

The two countries agreed to sign two MOUs, one for cooperation on SMART, Korea's nuclear power reactor design, and another on training the workforce. SMART is a small-sized nuclear power reactor which can produce enough power to desalinate 40 thousand tons of fresh water a day.

Korea's SMART nuclear reactor appealed to the Saudi government whose major concern is always about water supplies. With the ability to minimize costs and maximize efficiency, it is probable that south Korean companies will win a US\$2 billion project to build two mid-sized commercial nuclear reactors in Saudi Arabia. It will be the first time for both countries to commercialize a SMART reactor in the Middle East.

During the summit, President Park mentioned that the Korean government's "Three Year Plan for Economic Innovation" is in line with Saudi Arabia's long-term strategy. And she added her hope to expand and diversify bilateral cooperation into other areas, like information technol-



Park Geun-hye, president of South Korea, walks with Sheikh Mohammed bin Zayed Al-Nahyan, crown prince of the United Arab Emirates.

ogy, renewable energy, public health and medicine, investment, and security.

Agreeing with her remarks, King Salman responded that he expected more memoranda of understanding to maximize the mutual benefits, especially in broadcasting and communications technology where the Saudi people's major interests meet.

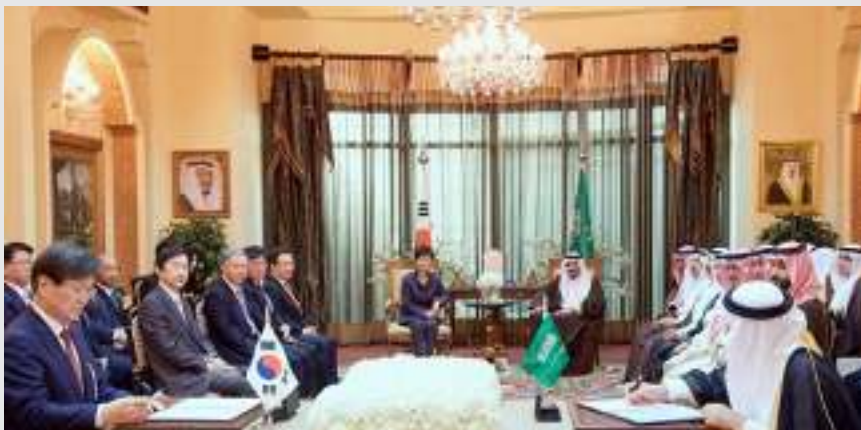
Building Stronger Ties in UAE

President Park Geun-hye met with Abu Dhabi's crown prince, Sheikh Mohammed bin Zayed Al-Nahyan, on March 5 in the United Arab Emirates, her third destination of four in the Middle East.

At the summit, President Park and the crown prince observed the signing of six Memoranda of Understanding to upgrade bilateral relations, especially in the nuclear power sector. The U.A.E. was Korea's first strategic partner in the Gulf region, forging a nuclear cooperation deal in 2009.

Under the agreement, Korea and the U.A.E. will work together to seek opportunities to enter emerging global markets by combining South Korean nuclear reactor technology with the U.A.E.'s funding power.

The two countries have collaborated on several high-profile deals in recent years, most notably to construct the Arab world's first nuclear reactors in Abu Dhabi. The project, worth US\$20.4 billion, marked South Korea's first export



President Park and King Salman are present when the two MOUs for mutual cooperation are signed on March 3.

of nuclear reactors. Last year, a Korean-built nuclear reactor was installed at a power plant in Barakah some 300 kilometers west of Abu Dhabi. By the agreement between the two countries in 2009, Korean companies are building four nuclear reactors here.

The Korean Ministry of Trade, Industry, and Energy expects that the MOU will enhance the comparativeness of Korean nuclear plant companies thanks to the capital strength of the U.A.E. With this MOU with the UAE, Korea is expected to meet enlarged opportunities to win more contracts."

According to the newly-signed MOU, the two countries will cooperate in the field of fund supply, construction technology, and labor supply for venturing into the international market.

In particular, one of the MOUs concerns the Korean cultural center in the U.A.E aiming to promote cultural exchanges. It will be the Gulf region's first Korean cultural center in Abu Dhabi, and will push for the joint development of cultural content. This is in response to a growing Korean population in the U.A.E. and the country's interest in Korean culture and language, thanks to the popularity of Korean TV dramas and K-Pop.

Now there comes a new ground for both countries. Two MOUs in agriculture and halal food were sealed. Halal foods are produced or processed under strict Islamic dietary guidelines, and the global market is expected to grow to US\$1.6 trillion in 2018 from US\$1.08 trillion in 2012. The deal will help Korean agricultural products make inroads into the Mid-

dle East for the first time, and aid in the development of Korean-produced, halal-certified products. Seoul and Abu Dhabi will share halal food technologies and market and certification data. Korean food companies will pave the way to export their products, while the U.A.E. can bolster its agricultural and food industries in cooperation with Korea.

At the end of Park's U.A.E. tour, reports said that Korea will start drilling for oil in the country in 2017. The Korea National Oil Corporation (KNOC) and a U.A.E. joint exploration team extracted 18,000 barrels of crude from appraisal wells in the Haliba field on the Omani border, and confirmed that its chemical component is close to Abu Dhabi's flagship Murban crude. A Korean consortium with GS Energy will start drilling up to 5,000 barrels a day starting in late 2017, and increase the daily production to 40,000 barrels in 2019.

Building Constructive Future in Doha

South Korea and Qatar signed Memoranda of Understandings (MOUs) to enhance bilateral cooperation in various fields on March 8.

Qatar, President Park's final destination on her four-nation trip around the Middle East, has been diplomatically tied with Korea since 1974. Park and her Qatari counterpart Emir Sheikh Tamim Bin Hamad Al Thanion agreed to expand cooperation in infrastructure, investment, energy, and medical services during a summit.

In the summit, Park said, "We believe that Korean companies have an advantage in entering the Qatari market, because their expertise and technology in infrastructure projects in the Middle East are highly noted." She suggested many potential areas of cooperation, especially related to the 2022 FIFA World Cup projects.

Qatar, the host country of the 2022 FIFA World Cup, plans to spend about US\$100 billion on construction projects including railroads, expressways, harbors, and stadiums. Korean officials said that Doha will present new business opportunities for South Korean companies to participate in US\$29 billion worth of infrastructure projects in the future, including the construction of the main stadium (US\$4 billion), railway (US\$2 billion) and roads, bridges, and sewage processing (US\$23 billion).

Over the bilateral summit, Seoul and Doha came to an agreement for joint investments in global markets. Qatar Investment Authority and Korea Investment Corporation planned to jointly establish a fund worth US\$2 billion for this purpose, they said. The Qatari agency also expressed its interest in six projects proposed by Korea's side, reviewing positively that the Gulf state would start making substantial investments in the Korean economy. The Qatar Investment Authority (QIA) currently holds about US\$256 billion worth of assets, and is expected to act as a major investor in the Korean economy.

The two sides also agreed to sign MOUs to get ready for further development and to solidify their bilateral coop-



The Korea and Qatar Bilateral Summit was well-attended.

erative relationship.

One of the MOUs was for the cooperation between the Korean Ministry of Culture, Sports and Tourism and the Qatar Tourism Authority. According to the United Nations World Tourism Organization (UNWTO), Qatar represents 3rd in GDP in 2014 by the IMF, and more than 1,000 patients go abroad for medical treatments annually, spending about US\$135 million. The Qatari government said that Korea will be the first stop for Qatari patients funded by the Qatar government, and discussed a way to send its medical workers to Korea for overseas training. If accomplished, Qatar will be the second country in the Middle East for Korea to export its medical services. The Qatari Emir said that he has been interested in cooperation between Korea and Qatar in the field of health and medical care.

Most of all, to boost research on the peaceful uses of nuclear energy and cooperation in human resources development, the Korean Ministry of Science, ICT and Future Planning and Qatar's Ministry of Energy and Industry agreed to secure more opportunities for Korean firms if Qatar plans to build nuclear reactors in the future.

Another MOU covers cooperation in education. Furthermore, in the service sector, the two leaders have agreed to systemize the training and hiring of Korean workers in Qatar's airline, education, and healthcare industries, as the Qatari Emir has complimented Koreans' work ethics and credibility. About 2,000 South Koreans are currently working in Qatar in sectors such as construction, finance, and energy, and up to half of them are in the hotel and airline business. In Qatar Airways, the country's state-owned flag carrier, one-ninth of the total employees are Korean cabin crew members.

The Qatar Minister of Energy and Industry said that exports to South Korea represented 20 percent of Qatar's total exports. The Minister also said that bilateral trade volume was at US\$27 billion in 2013, making South Korea the second biggest trade partner to Qatar. The chairman of the Qatar Chamber of Commerce and Industry (QCCI) praised the contribu-

tions of Korean companies in the establishment of many development projects, not only in Qatar, but also in other GCC states.



The official flag of the Gulf Cooperation Council.

Resumption of FTA Negotiations Needed

With President Park Geun-hye visiting the Middle Eastern countries ending successfully, it is said that Korea should resume FTA negotiations, which have been stopped, with the Gulf Cooperation Council (GCC) as soon as possible and target the markets in the Middle East.

A researcher in the international trade division at the Korea International Trade Association (KITA) said on March 1 that the GCC is currently pushing ahead with non-petroleum policies in order to lower the reliance on oil, and showing the signs to resume the FTA negotiations, which had been stopped. Also, this is the right time to establish a bridgehead aiming for the Middle Eastern markets through the FTA now.

The GCC started FTA negotiations with the Korean government in July 2008, but all negotiations were stopped due to the financial crisis of 2009.

The researcher in the international trade division at KITA urged the government to resume the negotiations with the GCC as soon as possible, saying that the GCC is resuming the FTA policies that stopped for a while, as the FTAs with Singapore and the Europe Free Trade Association took effect in in Sept. 2013 and July 2014.

In the commodity market, the annual export duties of Korea to the GCC amounts to US\$1.11 billion (1.22 trillion won). When most tariffs are removed through the FTA, the saving cost of the tariffs is estimated at US\$930 million (1.02 trillion won), which is the level of the Korea-US FTA.

Aggressive Investment for 2nd Middle East Boom

In order to create a second Middle East boom, the Korean government will make an investment of 5 trillion won (US\$4.46 billion) into higher-risk investment development projects.


It has decided to provide full support for Middle Eastern businesses, from financing and taxation to deregulations. It will also designate a service-type foreign investment region where Middle Eastern companies can get tax benefits and other perks. The goal is to encourage foreign capital investment from the Middle East in the domestic service industry.

The plan was announced at a trade promotion meeting hosted by President Park Geun-hye on March 19.

The government decided to expand financial support and investment guarantees to companies that participate in large plant projects, and city and water resource development projects in the Middle East.

To do so, it will raise the amount of loans given by the Korea Trade Insurance Corporation and the Export-Import Bank of Korea in the overseas construction and plant sectors this year by 2.9 trillion won (US\$2.59 billion) and 400 billion won (US\$357.14 million), respectively.

It will also introduce co-securities worth 300 billion won (US\$267.86 million) for K-sure, Korea Eximbank, and the indirect loan system or overseas on-lending worth 1 trillion won (US\$892.86 million) for the first time, increasing support to small and medium-sized companies.

In the measure, the government estimated an additional 5 trillion won (US\$4.46 billion) will be invested for policy funds. It is a support measure considering the fact that the financing ability of bidding companies has emerged as a major competitiveness for contracts, since the financial condition of oil-producing countries in the Middle East has been aggravated due to a fall in oil prices. The government expects that the scale of contracts this year will reach US\$70 billion (78.4 trillion won), and go up to US\$80 billion (89.6 trillion won) in 2017. 

2nd Mideast Boom

Korean Builders Strive for Large-scale Projects Expecting 2nd Middle East Boom

by Jung Yeon-jin

The total value of orders that domestic construction firms received from the Middle East has dropped sharply over the past several years. According to the International Contractors Association of Korea (ICAK) on March 9, domestic construction firms received only six new orders in the Middle Eastern region as of February, and the total amount of those orders reached only 1.5075 trillion won (US\$1.35 billion). It means that the number and the value of the orders they received from the Middle East decreased by 79.3 percent and 89.7 percent year-on-year.

This is mostly due to the fact that the Middle Eastern countries have canceled and postponed new orders again and again.

Indeed, Saudi Arabia has put off the Shoaiba Project to build an oil refinery and terminal worth 4 trillion won (US\$3.58 billion) and the Ras Tanura Clean Fuel Project. Also, Qatar stopped the Al-Karaana Petrochemical Complex Project, the construction cost of which amounted to 7 trillion won (US\$6.26 billion). As of last month, the total amount of orders from Saudi Arabia dropped from 1.3978 trillion won (US\$1.25 billion) to 717.1 billion won (US\$641.01 million), a 48.7 percent decrease from the same period last year. In Iraq, the figure also slumped from 7.2364 trillion won (US\$6.47 billion) to 644.1 billion won (US\$575.76 million), showing a 91.1 percent drop, as the power of the Islamic State, an extreme terrorist group, has expanded in the region.

At the same time that domestic construction companies are facing rough

going in the Middle East, which is usually abundant in projects, the expectation for a 2nd Middle Eastern boom is growing after President Park Geun-hye's visits to the Middle Eastern countries. This is because the Middle East is a huge market with numerous large-scale projects.

Daewoo E&C Heading towards Middle East

Daewoo Engineering & Construction started its overseas business in 1976 paving roads in Quito, Ecuador. About 10 years late to overseas business compared to other Korean construction firms, Daewoo E&C opted to focus on the niche market of Africa instead of the red ocean of the Middle East.

Since then, Daewoo E&C has dominated African markets, including Libya and Nigeria. Since the 2000s, the company has expanded its business to the Middle East by means of construction

diversification. At present, it is engaged in projects worth US\$7 billion in 10 sites located in seven Middle Eastern countries, including Saudi Arabia, Oman, and Qatar. The projects include petrochemical plant construction projects, the Al-Faw Port construction in Iraq, expressway construction in Qatar, a combined thermal power plant construction project in Sur, Oman, and a research reactor project in Jordan.

At the same time, Daewoo E&C is shoring up its portfolio to cope with external changes such as oil price fluctuations. According to the company, ordering parties in the Middle East are unlikely to



Saudi Arabian gas processing facility.



Sadala Tank Farm construction site in Saudi Arabia.

reduce their orders in the short term, even though international oil prices are currently showing some instability due to terrorist activities, shale gas development led by the United States, and foreign exchange fluctuations. Under the circumstances, the company is planning to maintain an aggressive stance to clinch more profitable projects in places like Qatar and Kuwait. Daewoo E&C opened up the Kuwaiti construction market last year, and a series of large-scale projects are forecast in Qatar.

In the meantime, Daewoo E&C is trying to turn itself into a construction developer providing comprehensive total solutions covering business planning, construction, financing, and management. The idea is to expand the scope of its business from construction, based on what it has accomplished in past EPC projects in overseas power generation sectors. Having the Korea Development Bank as its largest shareholder, Daewoo E&C is anticipating that it will be able to have a competitive edge in financing over other builders.

Its efforts at transformation are already bearing fruit in new town projects abroad. For example, it is currently leading the Star Lake City Project in Vietnam to build a 2,076,000 m² wide new town in the vicinity of Hanoi. A total of US\$2.528 billion is scheduled to be invested solely by private-sector investors, US\$1.068 billion in the currently-ongoing first phase.

"The Star Lake City Project is Korea's first new town project abroad in which a single builder covers planning, financing, construction, and sales based on its own expertise and technological strength," Daewoo E&C explained.

GS E&C Expanding Business Scope in Middle East

GS Engineering & Construction has continued winning major contracts in the overseas markets, including the Middle East, since last year. Examples include the 1.71 trillion won (US\$1.53 billion) Clean Fuels Project in Kuwait, 2.42 trillion won (US\$2.17 billion) Karbala Project in Iraq, and 320 billion won (US\$287 million) combined cycle power plant construction

project in Kais, Algeria.

In May last year, it recorded an order amount of approximately 760 billion won (US\$681 million) with the petroleum plant expansion project in Rumaitha and Shanayel, U.A.E. Three months later, it obtained the Doha Link Bridge construction project worth 599.2 billion won (US\$537.4 million) in Kuwait. The company is aiming to earn 11.85 trillion won (US\$10.6 billion) this year, including 6.15 trillion won (US\$5.52 billion) abroad.

These days, GS E&C is expanding the scope of its overseas businesses from plant construction to civil engineering and power generation. To this end, it is moving ahead with new strategies to better penetrate Middle Eastern countries such as Saudi Arabia and Qatar, where it has been a leading plant builder.

It is also in this context that GS E&C recently signed an MOU for a joint venture with the U.A.E.'s Arabtec Holdings. The company is expecting that the MOU will bring more opportunities in the Middle East and North Africa in the field of

infrastructure construction. Founded in 1975, Arabtec Holdings is one of the largest companies in the U.A.E., and is the holding company of Arabtec Construction that built the Burj Khalifa with Samsung C&T.

In Sept. 2013, GS E&C won a US\$500 million contract for the southern section of the Doha Metro Red Line to start a metro construction business in the Middle East. In August last year, it was picked to be in charge of the Doha Link Bridge Project, its first bridge construction project in the region.

The builder has executive members responsible for local marketing activities residing in the U.A.E., Kuwait, and Iraq. Also, it has been engaged in aggressive sales activities in Asia, Africa, Latin America, Turkey, and CIS countries for market diversification. More recently, it is trying to get opportunities in such fields as offshore plant construction, LNG, and gasification for business diversification from oil refinement, petrochemical, gas, and oil sand.



Sohar Aromatics plant in Oman.



Manifa Gas plant construction project in Saudi Arabia.



Green diesel plant in the U.A.E.

SK E&C Setting New Records in Kuwaiti Market

Five major Korean builders won the Clean Fuels Project in Kuwait last year. SK Engineering & Construction obtained the oil refinery construction contract for Mina Al Ahmadi (MAA), worth US\$4.8 billion, with GS E&C, and the Japanese JGC Corporation. The news has led to an increasing interest in the 20 year-long history of SK E&C's business in Kuwait.

MAA is the oldest and largest oil refinery complex in Kuwait. Built in 1949 and located 45 km south of Kuwait City, MAA accounts for more than half of the


country's oil refining capacity. SK E&C entered the Kuwaiti market in 1994 and has built trust by taking charge of 12 projects since then. Its business relationship with MAA started in 1996, when it began to build fuel gas desulfurization facilities there at an investment of US\$150 million.

In 2001, SK E&C was picked as the one to recover MAA from the accidental explosion that was caused by the deterioration of the facilities. At that time, the Kuwaiti government acknowledged SK E&C's advanced technological strength in fire recovery, and entrusted the company with a private contract, which was very exceptional. Such accomplishments of SK E&C have resulted in its dominance in the Kuwaiti construction market.

Between 2003 and 2007, it won three contracts worth US\$2 billion combined for the construction of crude oil gathering facilities. The contract amount of the one that was obtained in 2005 was US\$1.221 billion, the largest in the history of Korea construction firms' overseas projects until then. In addition, the project was completed without any accidents. SK E&C recorded 41 million safety man-hours in

the project to surpass all other Korean builders.

At present, SK E&C is on a roll in Kuwait and is expected to become the first Korean construction company to reach a contract amount of over US\$7 billion in the country. In 2012 and 2013, it clinched deals for substation modernization and crude oil gathering center construction, and the Clean Fuels Project increased the number of its projects and cumulative contract amount in Kuwait to 13 and US\$6.6 billion, respectively. The numbers, second to none in the Korean construction industry, can be attributed to SK E&C's technological superiority and the trust it has built for over two decades with various organizations such as the Kuwait National Petroleum Company.

Kuwait is expected to place a US\$3.5 billion-worth Lower Fars Heavy Oil Development (LFHOD) contract within the first half of this year. Also, the US\$15 billion-worth New Refinery Project (NPR) for plant facility renovation is predicted to kick off within this year. Both of them are expected to be boons for SK E&C's business in Kuwait. 



Kuwait MAA site at daytime.



Kuwait MAA site at daytime.



Kuwait MAA site at night.



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Nuclear Power Cooperation

Korean Nuclear Power Plant Takes Root in Middle East

by Jung Yeon-jin

A good news broke out in the United Arab Emirates on Dec. 27, 2009. After a keen competition with strong nuclear powers, including the U.S., France and Japan, a consortium of South Korean firms led by Korea Electric Power Corporation won contract to build-operate-and-transfer a 5,600 MW nuclear power plant with four advanced power reactors of 1,400 megawatt (APR1400) each from Abu Dhabi. This was the first export of nuclear power in South Korea and the country had become the 6th nuclear exporter in the world.

Korea had turned from an importing

country of nuclear power into an exporting country in 31 years after it established the first nuclear power plant, Kori 1, in Korea with foreign technology in 1978. The estimated profits from construction and operation of four reactors in the UAE stand at about US\$40 billion (45.05 trillion won). The figure is equivalent to the export sums of 2 million units of medium-sized vehicles and 360 vessels of oil tankers.

KHNP Exports Korean-designed Nuclear Reactors

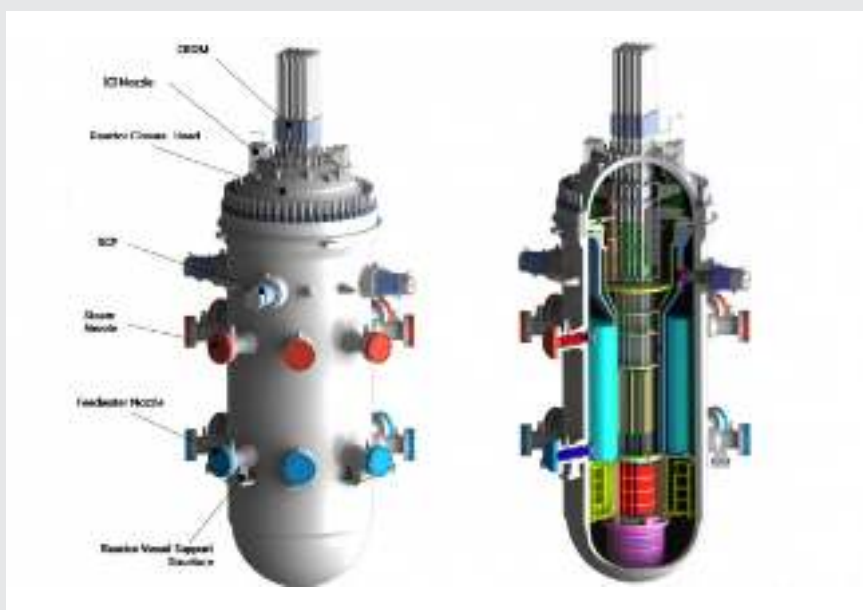
President Park Geun-hye's recent visit to the Middle East will bring more opportunities for exporting the system-integrated modular advanced reactor (SMART)

that Korea has developed. "We signed an MOU with Saudi Arabia a week ago to develop and design SMARTs in cooperation with each other, build two atomic power stations in Saudi Arabia and export the reactor to third countries in the long term," he explained.

The SMART is a small-scale nuclear power plant with a capacity of 100 MWe, equivalent to approximately one-tenth of a full-scale commercial atomic power station. It is characterized by having main system components in a single container without any piping, thus being free from any piping accidents. In addition, it is capable of supplying heat for seawater desalination, district heating, and industrial purposes, and can be built at a low



A computer-generated mockup of a completed APR1400 nuclear power plant.



A diagram of a System Integrated Modular Advanced Reactor.

cost and within a short period of time, for about 1 trillion won (US\$890 million) and three years, to be specific.

“Small-scale reactors are a perfect choice for the Middle East, where the cities are at a distance from each other,” the Minister continued, adding, “The SMART, which is much safer and more economical than thermal power generation, will enjoy high demand in the region.” He also mentioned, “Furthermore, the reactor will make inroads into various overseas markets with 90 percent of nuclear power plants around the world being small ones, and many of them to be superannuated within years or a few decades.”

Just after Korea Hydro & Nuclear Power Co., Ltd. (KHNP) signed an agreement with Saudi Arabia to export SMART nuclear reactors, the news flashed around the world that the Korean-designed water nuclear reactor jumped up to be a global reactor. The Korea’s light water nuclear reactor APR1400 passed preliminary review for the design certification by the U.S. Nuclear Regulatory Commission (NRC) and started a full review. This was the moment that Korean reactors are re-exported to the birthplace of nuclear reactors, the U.S. The certification from the NRC means the qualification to construct nuclear power plants in the U.S. However, it has practically more values as the internationally accepted certification. Accord-

ingly, it will accelerate Korean reactor exports to the Middle East in earnest.

This is the 4th time in the world for a reactor to pass design certification. Until now, one reactor design from the U.S. is certified, while two other designs from France and Japan are under examination.

The APR1400, which is currently in operation as the Shin Kori 3 and 4 reactors in Korea, is an advanced water nuclear reactor developed by the Korea Electric Power Corporation (KEPCO). Along with KEPCO, the KHNP submitted the design certification application to the NRC on Dec. 23 last year.

Hyosung Reinforces Presence in Saudi Arabia Power Market

Hyosung has started aggressively targeting the power market in Saudi Arabia worth 2 trillion won (US\$1.78 billion).

On March 3 (local time), Hyosung and its subsidiary specializing in producing pumps Hyosung Goodsprings signed MOUs of nuclear power cooperation between Korea and Saudi Arabia in Riyadh of Saudi Arabia, being attended by Saudi Services For Electro Mechanic Works (SSEM) General Manager Omar A. Hamze, Korea Electric Power Corporation (KEPCO) President Cho Hwan-ik and Hyosung Group Vice President Cho Hyun-sang.


These MOUs are signed between Hyosung and the Saudi Arabian largest EPC firm SSEM, and Hyosung Goodsprings and Zamil Group, the largest private company and manufacturer and exporter of steel structures in Saudi Arabia, respectively.

They are part of the Korean government’s order activity of the nuclear power plant construction project in Saudi Arabia in order to stably supply power equipment. As the power demand in Saudi Arabia is expected to be almost tripled, from the current level of 45GW to 120GW, the country is planning to expand nuclear power plants of about 18GW by 2040.

Saudi Arabia will award a contract for two reactors first as early as 2016. Among power auxiliary equipment worth a total of 2 trillion won (US\$1.78 billion), Hyosung will participate in the project of 600 billion won (US\$532.72 million), including high voltage transformers, contact breakers, motors, emergency diesel generators and pumps, through the MOU, and consolidate the foundation for the Saudi Arabian power market invasion.

Hyosung is planning to aggressively target the market by establishing the cooperative relationship with the KEPCO when the Korean government wins contracts to build nuclear power facilities from Saudi Arabia in the future.

Hyosung Group Vice President Cho said, “As Hyosung has successfully entered the market in the Middle East and Africa, which have poor power environments, it has continued to win contracts based on its superior technology. Also, it has been establishing trust and expertise. By the contribution to construct the system for stable power supply in Saudi Arabia, the company will solidify its position as an excellent supplier and strengthen its status as supplier of core equipment of the electricity industry in Saudi Arabia in the future.”

Meanwhile, Hyosung has successfully won and been managing the substation ECP project worth a total of 450 billion won (US\$399.54 million) in Qatar from 2009, strengthening its marketing strategy for the Middle East. 

Korean Spine Clinic

Wooridul Hospital Spreads Spinal Treatment to Middle East

Wooridul Hospital is Korea's first specialized spine clinic. It has focused only on treating spinal diseases for three decades, and it has led the development of a new, minimally invasive spinal treatment.

Since the establishment in 1982, Wooridul Hospital has presented a total of 630 papers, including 262 theses at the Scientific Citation Index (SCI) level and 28 papers in textbooks at home and abroad. These results are the world's highest figures in the spine sector. Since the papers are so influential in the field, they are frequently cited.

Wooridul Hospital currently manages 10 hospitals throughout the nation, including in Seoul. It also operates its clinics abroad, such as Wooridul Spine Centre in Dubai, Wooridul Spine Center in Jakarta and Wooridul Turkey Spine Center in Istanbul.

In the hospital, 160 doctors, are working together to offer "Spine Total Care" with 1,900 employees,

The unique feature of Wooridul Hospitals overseas is that they export only intangible assets, such as medical technology and medical systems, without any capital investments. The hospital is developing a new model of digital hospital export that integrates state-of-the-art medical techniques and advanced information technology.

In 2008, the hospital was selected as a participant in the medical field cooperation between the Ministry of Knowledge Economy (the current Ministry of Trade, Industry and Energy) and the UAE government. In 2009, Mubadala Development Company, an investment and development company of the UAE government, asked the hospital to enter the medical market. Wooridul Hospital opened a clinic there in 2011.

Wooridul Spine Centre in Dubai currently gets commissioned fees for management, royalties according to sales, and performance-based payment every year. The center employs a total of 60 employees, including both Koreans and locals.

In December last year, Humaid Al Hammadi, chairman of the Korean-Emirati Friendship Society, visited Wooridul Hospital and discussed cooperation in educational programs for spinal medical techniques and patient transportation.

Wooridul Hospital signed an agreement with the Healthy Authority and the Union Defense Force of the UAE in 2012 to transport patients. After the conclusion of the agreement, the num-



The front entrance to the Wooridul Spine Centre in Dubai, the U.A.E.

ber of outpatients and inpatients from the region is rapidly increasing, from 45 in 2012 and 74 in 2013 to 186 as of November 2014.


Also, it does not just end with one-time export. The hospital can maintain the same level of healthcare quality by directly managing the local clinic and constantly educating the local medical team.

An official from the hospital said, "In order for the hospital to advance into the Middle East, understanding Middle Easterners is the most important. Once mutual confidence is established, including understanding Islamic culture and building business networks, we can get a strong word-of-mouth marketing effect."

There is no specific medical database in the Middle East. The reason why advanced hospitals in the U.S. and the U.K. failed in the region is that they exported only the brand name of the hospital, rather than deploying medical professionals such as doctors or nurses.

Based on its wide experience and expertise in the past three decades, Wooridul Hospital has successfully established both "specialrising," which intensely invests limited capital of the hospital into one area and makes it specialized, and a "network" between specialized hospitals.

It is said that this has become a stepping stone for Wooridul Hospital to lead the globalization of medical technology through its overseas expansion, including in the U.A.E..

An official from the hospital said, "However, our biggest competitiveness is to stick to the basics. Our medical technical skills to cure patients have made Wooridul Hospital today." He says that its success strategy is to have a long-range view, understand the culture of the country to enter, and establish mutual trust with the region. 

by Mary Park

Crest of Korean Wave

Korean Culture and Information Service Broadens Global Reach



Launched in 1971, the Korean Culture and Information Service (KOCIS) started as a communication bridge to promote Korean national brands overseas. KOCIS is dedicated to providing global citizens with accurate and up-to-date information about Korea. Its master plan is to boost the global image of Korea and assist in events and exhibitions that raise the awareness of Korean culture both domestically and internationally.

To produce foreign language publications about Korea, it operates the government's official multilingual website, Korea.net. A gateway of information about Korea, Korea.net aims to provide lively news of Korean sights and spots, and offers convenient and user-friendly access to a wide variety of information about the country.

It was recently reported that more than 100 million visitors have viewed Korea.net's web pages. Through the web site, Korea spreads its soft power, improving the nation's image, not only for short term goals but also for sustainable national

growth and development. For this same reason Korea.net also continues to create international Hallyu content.

The Korean Culture and Information Service currently operates in 27 cultural centers in 23 countries around the world. In the Asia Pacific region there are ten Korean Cultural Centers to satisfy demand from consumers of the Korean Wave. They cover Japan, China, Thailand, India, Vietnam, Indonesia, the Philippines, Australia, Kazakhstan, and Turkey. Moreover, there are eight centers in Europe, including the U.K., France, Germany, Russia, Spain, Poland, Belgium, and Hungary. The Americas have centers in four countries: the U.S., Argentina, Mexico, and Brazil. Africa is not an exception – there are centers both in Nigeria and Egypt. In addition to these, Korea.net also cooperates closely with the 41 cultural attachés active at Korean embassies and consulates around the world as they conduct their mission as envoys of Korean culture.

This month, Korea and the U.A.E. upgraded their bilateral relationship to a

strategic partnership by signing an MOU. According to the agreement, the Korean government will establish a cultural center in Abu Dhabi next year. At the same time, the U.A.E. proposed opening a cultural center in Korea. Those activities are expected to strengthen the bilateral cultural relationship, promoting economic and political exchanges between the two nations.

The purpose of the Korean cultural center is to combine Korean arts and entertainment content and its advanced IT to allow international visitors to watch and hear the essence of Korea. The experience will afford a fitting background to create healthy companionship between Seoul and Abu Dhabi, building a strong consensus. Inside the planned cultural center, there will be a special exhibit that will let all visitors interact in real time with people in Seoul, which is a part of the cultural creativity conversion program of the center.

BK

by Mary Park

Water for Our Future

The 7th World Water Forum 2015 for Practical Action



by Mary Park

The 7th World Water Forum 2015 takes place from April 12 to 17 at the EXCO exhibition center in Daegu and the HICO convention center in Gyeongju under the slogan “Water for Our Future.” Over 35,000 heads of state, government officials, international organizations, NGO personnel, scholars, and entrepreneurs from more than 170 countries will attend the occasion to make it the largest international event ever in the region.

Daegu City and North Gyeongsang Province succeeded in attracting the international conference with their innovative proposal in which practice is suggested as the core value for the future of the human race, whereas the six past forums focused on seeking solutions to water-related problems. The regions’ advanced water resources management technology witnessed in Nakdong and Kumho River water quality improvement and ecological stream restoration also contributed to the selection.

Top Priority is Action

“The 7th forum, which is the second one in Asia and first in Korea, focuses

on establishing specific mechanisms for putting into practice the solutions that the international community has found,” said Jhin Yong-hwan, director general at the Bureau of World Water Forum Support. He added, “The Science & Technology session is newly organized in the forum in this context.” As a result, the event is expected to be a boon for the exchange of practical techniques among countries.

In relation with it, the “Open Forum” will be conducted in an innovative way based on Korea’s advanced information technology.

Large-scale Event with 300 Sessions

The forum includes approximately 300 sub-sessions constituting four major sessions. First of all, the “Thematic Process” session handles 16 themes such as governance, water & food, finance, and water & ecosystems to discuss solutions to water-related problems. Also, the Water Showcase is held as a special program for the presentation of best practices.

In the “Regional Process,” information is exchanged on water-related problems by continent and country such as water management in border areas, and 40 to 50 sub-sessions cover the seven regions

of Asia-Pacific, Europe, the Americas, Africa, the Middle East, the Mediterranean, and the Economically Water Insecure (EWI).

The “Political Process” is for leaders of countries, lawmakers, ministers, and local governments to urge political action. The Science & Technology session comes with three special programs of a White Paper Series, CEO Innovation Panel, and World Water Challenge, along with five main focuses covering 25 sub-focuses so that the participants can discuss techniques and business measures to tackle the problems.

In addition, the “Citizen’s Forum” takes place so that civic organizations can discuss the significance and use of water and how to deal with water conflicts. About 200 cultural events like concerts, movie screenings, and receptions hosted by enterprises and public institutions are scheduled to accompany the Citizen’s Forum.

Approximately 900 booths will be set up in the 18,287m²-wide exhibition venue located on the first and third floors of the EXCO Convention Center. A large number of companies such as Masdar, Toray Chemical, and POSCO E&C are to


present various exhibits relating to water treatment, alternative water and energy resources, water industry infrastructure, and water resources management in the exhibition halls of the participating countries including Brazil and France, the next and previous hosts.

Thorough Preparation for Convenience of Participants

The organizing committee is planning to provide 3,500 rooms at 17 hotels and 100 Greenstels nearby, and to run information desks at the former for the convenience of the visitors. It is going to cooperate with nearby hospitals, restaurants, laundries, and the like to the same end, too.

More flights and trains will be provided between the Daegu and Incheon Airports and the Seoul and East Daegu Train Stations for easier access to the venues. Information desks will be set up at the Incheon, Gimhae, and Daegu Airports and the East Daegu Station. Shuttle buses are to be available to and from the Daegu Airport, the East Daegu Station, and among the hotels and the Greenstels. The services

of shuttle buses will also be provided for transportation between the Daegu Airport and HICO, HICO and the New Gyeongju, EXCO and HICO, and HICO and the accommodations. Free transportation cards will be given to the participants as well for use in Daegu and Gyeongju.

The hosts are expecting that the 7th World Water Forum will bring an opportunity to share Korea's experience in the industry with countries in the face of water-related problems and help companies in the local water industry clusters expand their business abroad. 

Message from Chairman Lee Jung-moo

Water is the source of life. However, so many lives in the world are suffering from water-related challenges. Currently, about one billion people are suffering from water shortages, and the number is expected to grow to half of the global population by 2025. About 80 percent of diseases occurring in developing countries are related to water, costing 6,000 children's lives a day. Regional water conflicts near the Mekong River, the Nile River, and the Jordan River are occurring.

These challenges are not the problems of a single nation. Rather, they are global challenges that require sustainable and shared responses based on cooperation among various stakeholders such as governments, civil society, and academia.

That is why Korea is going to host the 7th World Water Forum this April. Around thirty 35,000 participants from about 170 countries with all global water stakeholders including governments, international organizations, NGOs, and corporations will gather to solve these challenges and devise concrete implementation measures.

With the deadlines of the Millennium Development Goals coming and the Sustainable Development Goals starting to take shape, the year 2015 will be a critical moment for the cause of water. Therefore, a successful 7th World Water Forum will serve to put water high on the international agenda.

For the success of the Forum, Korea has put much effort in the three-year preparatory process. During the Kick-off Meeting in Daegu in May 2013 and the 2nd Stakeholders Consultation Meeting in Gyeongju in Feb. 2014, participants were able to witness joint efforts and passion for tackling water challenges.

At the 7th World Water Forum, concrete implementation plans regarding the agenda that has been discussed throughout the six previous Forums will be established in order to ensure participation and implementation from diverse stakeholders.


To this end, the Science & Technology Process in which countries will share experience in water-related technology was newly added to the 7th World Water Forum. Focusing on the importance of science and technology in addressing water issues, this process aims to encourage the exchange of water-related cutting-edge technologies and information, and thus close the technological gaps between developed and developing countries.

Also, the Thematic and Regional Processes will help participants discuss more specific issues and will implement solutions drawn from the 6th World Water Forum. In the Political Process, policymakers and international organizations will cooperate to establish the leadership of implementation to address water-related problems. The Citizen's Forum will



provide a platform for more lively discussions among global citizens.

During the Forum week, a large scale international water exhibition will take place in EXCO, Daegu. With the participation from many countries and water-related enterprises, the exhibition will have stands concerning water resources management, water treatment, alternative water resources, energy, infrastructure, related industries, and governance.

Since the 7th World Water Forum invites the world to discuss the water challenges we all face and to develop solutions beyond the difference in nationality and culture, active participation is greatly needed from governments, academia, research institutions, industry and others, to overcome common water challenges and crises. 

Filtration Expert

Daejin Filter Develops Nanoscale Far Infrared Water Purification Filter



Daejin Filter CEO Lee Bong-dae Filtration Expert.

Since starting its business in 1990, Daejin Filter (CEO Lee Bong-dae) has been a specialized producer of environmentally-friendly air and water filter parts.

The company is known as a leading manufacturer of water filters, air filters, water purifiers, nanofiber filters, micro filters, filter elements, filter housings, purifying systems, home purifiers, and portable purifiers in South Korea. The company has built a good reputation as a reliable

supplier of these products in the filtration field. The company assures its potential customers that they can “bring the most profitable outcome with the most qualified products.”

The company has qualified for both ISO 9001 and Materials Parts Expert Company certification systems, and stakes its reputation on a claim of zero-defect quality. The company's number one priority is achieving complete customer satisfaction in price and quality by the best cost competitiveness through the introduction of Enterprise Resource Planning (ERP) and continuous innovation.

A company representative pointed out their newest product, as an example of their pursuit of innovation. It is a Nanoscale Far Infrared Filter that the company hopes to take the company to the next level of growth.

Nanoscale far infrared water filters are created using an environmentally-friendly nanofiber manufacturing process that was developed in a project supported by Korea's Small and Medium Business Administration. The project worked to create complex state-of-the-art biotech-

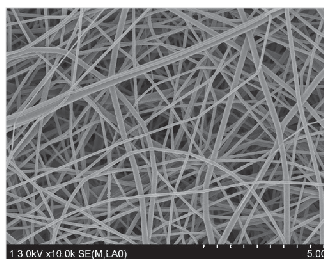
nology and nanotechnology products that incorporated nanoscale far infrared devices.

Nanofilter Core

A nanofiber membrane is the core of the advancement behind the Nanoscale Far Infrared Water Filter by Daejin. Nanofibers are small threads only a few hundred nanometers in diameter. Because they are so small, a whole lot of these fibers can fit into a small area, which means their surface area per unit volume is quite large. They are also very flexible and facilitate pretty much all of the functions that a filter needs to perform.

The nanofibers are produced by a melt-electrospinning technique using environmentally-friendly polypropylene. There are other ways to make nanofibers using dimethylformamide or tetrahydrofuran, but these methods produce toxic solvents and are not at all environmentally friendly, so Daejin doesn't use them.

The polypropylene nanofibers produced by the melt-electrospinning process are thinner than that produced by a solution-electrospinning process. And





Performance of Nano Far Infrared Filter
▶ Fourier transform Nuclear Magnetic Resonance, FT-NMR

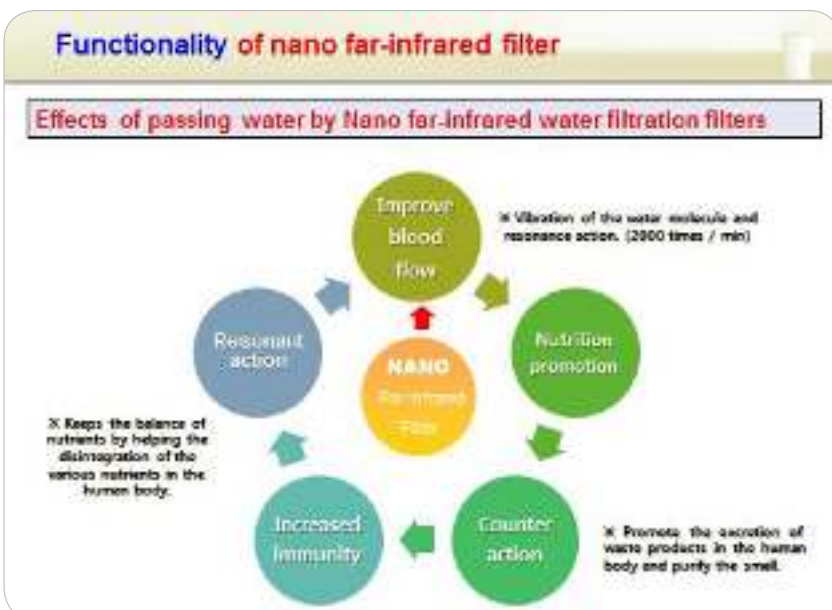
■ The average number of water

SAMPLE	Water low width	N
Rain water	119 Hz	4
Spring Water	122 Hz	14
Mineral water	94 Hz	4
Well water	105 Hz	14
Tap water	117 Hz	22
Distilled water	118 Hz	8
Ion-exchange	63 Hz	1
Hot Spring Water	79 Hz	8
Human serum	142 Hz	6

■ Nano far infrared filter passing water (55.58)

SAMPLE	ITEMS	UNIT	METHODS	HALF LINEWIDTH
GENO FILTER (DAEJIN AFTER)	Half Width	Hz	FT-NMR	58.81
NANO FAR INFRARED FILTER (DAEJIN AFTER)	Half Width	Hz	FT-NMR	58.39
NANO FAR INFRARED FILTER (4018AFTER)	Half Width	Hz	FT-NMR	55.58
NANO FAR INFRARED FILTER (7218AFTER)	Half Width	Hz	FT-NMR	58.75
NANO FAR INFRARED FILTER (9018AFTER)	Half Width	Hz	FT-NMR	59.16

※ FT-NMR (Fourier Transform Nuclear Magnetic Resonance) is an analytical device for performing a molecular structure analysis of a compound and composition analysis. Nuclear Magnetic Resonance (NMR) and FT-NMR (Fourier Transform Nuclear Magnetic Resonance) are used to analyze the chemical structure and composition of a substance. The chemical structure and composition of a substance are determined by the chemical shift and the intensity of the NMR signal. The chemical shift is the difference in the chemical shift of a substance from a reference substance. The intensity of the NMR signal is the area under the NMR peak. The chemical shift and the intensity of the NMR signal are used to determine the chemical structure and composition of a substance. The chemical shift and the intensity of the NMR signal are used to determine the chemical structure and composition of a substance.



since there are no toxic byproducts of this process, the polypropylene nanofibers can be used in food or even pharmaceutical production.

Far Infrared Core

Far infrared radiation is used in many types of homeopathic remedies, generally to apply heat. The far infrared is defined as electromagnetic waves in the wavelength of 4-1000 μ m. The 5-20 μ m wavelength is said to be good for stimulating blood circulation and recovering from fatigue. It is said to also facilitate flower blooming and to give long life.

The company says that the far infrared is a source of thermal energy and photons. It is said to have an indirect effect on water in the body. On the skin it is said to promote endothelial cell membrane receptors to stimulate the body's blood circulation. And far infrared is said to have a role in the early discharge of waste products.

Enhancing Human Body Immunity

Daejin's Nanoscale Far Infrared Water FiDaejin's Nanoscale Far Infrared Water Filter performs microfiltration and subjects the water passing through it to far infrared rays. The company says that it is effective to supply energy to the human body and to improve human immunity by activating its cell.

The filter can be used in many different fields. It can be used in water purifiers, showers, drink dispensers, and kitchens. In the microfiltration industry it can be used for decontamination and improving odors in industrial environments. It can also be used with plants, animals, in aquariums, fish farms. it has many potential agriculture and livestock sector applications.

The corporate philosophy of Daejin Filter is to put consumer health and the environment at a priority. They make a variety of products in many different fields. The company says that contacting them at any time is welcome, and the will do their best to fill needs, whether they are with an existing product or via research and development.

www.daejinfilter.com

Shin Jeung Mach

Planting Standards on Korean Valve and Pipe Industry for Clean Environment



Oh In-sik, CEO of Shin Jeung Mach. Co., Ltd

Shin Jeung Mach. Co., Ltd. (SJM) has been producing many different valves used in water supplying and drainage facilities to provide clean water and maintain a safe environment.

Before SJM, most of the equipment used in water supply and drainage facili-


ties was imported. But the company succeeded in developing butterfly valves and sluice valves to lay the groundwork for the valve industry in Korea. The company also requested the government authorities to establish the Korean Industrial Standards for valves and pipes, making contributions to the standardization of water facilities.

SJM controls quality by the measurements of all parts at each step of process completion, from buying the materials to the stable supply to customers.

SJM is directing its efforts toward its work environment & quality control, as a way of ensuring a stable supply of high-quality products.

Furthermore, in order to fulfill its obligation as a global corporation, SJM has established a manufacturing structure that takes environmental impact into account. Employees undertake their work in all

processes, keeping in mind the conservation of energy and other resources.

The company's products include many different types of butterfly valves, from metal seat to horizontal or vertical, to electric actuator versions. It even produces double disc butterfly valves. Each of their products meets Korean Industrial Standards for butterfly valves of that type, which is understandable, since the company had a hand in creating those standards to begin with. The company says that their valves are easy to operate, even if the valve is highly overloaded, such as with strong water pressure. Each valve can be operated by hand, or by electricity, via cylinders, or other custom styles of operation. The metal seat butterfly valves are most often used for water filtering and supply, while the others can be used for water or sewage. 

www.sjvco.co.kr



SHIN JEUNG MACH. CO., LTD.



Metal Seat
Butterfly Valves

Butterfly Valves
(Horizontal Type)

Butterfly Valves
(Vertical Type)

Electric Actuator
Butterfly Valves

Double Disc
Butterfly Valves

Blue High Tech Corp.

Harmonizing Humans and Nature Lives with Natural Purifying Technologies



The Blue High Tech Corporation is working on research and development projects to create a more healthy and clean environment where people can live together in harmony with nature. The company works to produce many different products along these lines using their patented techniques.

The company develops tree filter equipment, one type of non-point-pollutant reduction equipment, and several different types of pipes. Their block and sand filter pipes, and their gravel filter pipes prevent soil erosion and manage rain enough to make a rain garden. The company has also obtained a patent on a green wall


system that makes it possible to farm and plant trees in places that normally don't see forestation.

The company also provides a landscaping design service that will install a rain garden, rain storage pond, and provide landscape consulting.

The company says that it is dedicated to promoting research and development for a better future.

Blue High Tech creates tree rain management devices for the filtration of non-point pollutants. When installed in tree-planted places, it uses filtration to emit non-point pollutants such as oils, nitrogen, phosphorus, and micro float. It also turns water to gray water, reusable for plants, by keeping it in a rain storage pond. It can clean water of non-point pollutants with its natural purifying techniques even in parking lots, squares, or roads.

The product comes in parts that can be assembled easily. It decreases the overhead of worrying about the substructure of dispersion rain management and the non-pollutant reduction system.

Blue High Tech's products are mostly small and medium-sized, perfectly suited for rainwater purification. The product's superstructure has a strong filtration ability, which lets the substructure do its job very well. They are machine assembled, making for easy maintenance. They are all eco-friendly as well. 

www.bluehitec.co.kr



Before and after Blue High Tech's tree rain management device is installed to take care of a sidewalk tree on one of the many streets of Seoul.

7.5 Trillion Won Investment

Lotte Group to Make Largest Ever Investment of 7.5 Trillion Won



Park Geun-hye (right), president of South Korea, Seo Byung-soo (center), mayor of Busan, and Shin Dong-bin (left), chairman of the Lotte Group, at the dedication ceremony for the country's seventh innovation center.

Lotte Group is planning to make the largest ever investment of 7.5 trillion won (US\$6.82 billion) this year. The figure is more than 30 percent of last year's 5.7 trillion won (US\$5.18 billion).

A Lotte Group representative stressed, "The decision reflects Chairman Shin's determined will to seek consistently for next-generation growth engine of the group."

By business sector, the group will invest 3.4 trillion won (US\$3.09 billion) in the distribution sector, 1.5 trillion won (US\$1.36 billion) in the heavy chemical and construction sector, 1 trillion won (US\$908.84 million) in the food sector, 1.1 trillion won (US\$999.73 million) in the tourism and services sector, and 500 billion won (US\$454.42 million) in other sectors.

In the distribution sector, Lotte will invest intensively in the construction of Omni Channel, which the group considers to be its new growth engine. Omni Channel is the service which allows consumers to search and purchase products with various channels from online and offline to mobile devices. It is the preemptive mea-

sure for global retailers trying to enter the domestic market.

Chairman Shin said in the presidential board of the group last year, "Once we succeed in the construction of Omni Channel, we will have the competitiveness that rivals global retailers, including Amazon."

In the heavy chemical and construction sector, Lotte Chemical is taking the lead to strengthen its global competitiveness. Lotte Chemical is the first South Korean petrochemical company to start building an ethane cracker plant, which is based on low-cost shale gas, in Louisiana, U.S. Aiming to begin commercial production in 2018, the group plans to invest 1.5 trillion won (US\$1.36 billion) in the project collaboratively with the U.S. integrated chemicals company Axiall Corporation.

Investing a total amount of 3.7 trillion won (US\$3.36 billion), Lotte Group is planning to make a steady investment in the construction of the Lotte World Tower and Mall with a goal of completion at the end of 2016.


In the food sector, the group will increase investments in the develop-

ment of healthy and premium products and the expansion of overseas markets. Lotte will also invest a total of 600 billion won (US\$545.31 million) by 2017 in the expansion of production facilities for Kloud Beer, which was released last year with the product concept of "beer with no added water," and is gaining popularity among consumers.

In the tourism and services sector, starting with Lotte City Hotel Ulsan in the first half of this year, Lotte Hotel will open Lotte City Hotel Myeongdong and Lotte Lifestyle Hotel Myeongdong in October and December, respectively. Lotte Hotel is planning to run 40 hotel chains at throughout Asia by 2018.

In the recent selection of the third operators of duty free shops in the Incheon International airport, Lotte Duty Free has secured four sections, which is the largest. As it is also pushing ahead with opening its duty free shops in the Southeast Asian region and downtown Japan, Lotte Duty Free will definitely be expanding its overseas businesses.

Meanwhile, Lotte Group teamed up with the Korean government and Busan City to open the latter's seventh innovation center in the Korea's second largest city. Lotte will account for half of the proposed 230 billion won (US\$204 million) fund, while Busan Bank and the Busan City government will contribute 16 billion won (US\$14 million) and 4 billion won (US\$3.5 million), respectively.

The fund is designed to help startups grow in a wide-range of film industry activities, including investment, distribution, and screening. It will help the dreams of small and medium sized film firms come true, creating synergy from the fund germinated from its multi-decade success in the related businesses. 

by Jung Yeon-jin

CJ Recognized by Harvard

Harvard MBA Introduces CJ E&M Chairman's Venture Success



Korean pop artists on the stage at KCON 2012, on Oct. 13. (Photo by Peter Kaminski via Wikimedia Commons)

The CJ Group, Asia's number one content and media company, has produced class materials for Harvard Business School with its successful investment on KCON, an annual K-Pop convention held in the United States.

A Harvard Business Case Study examines the process of the birth of KCON, the first ever large-scale convention dedicated to "All Things Hallyu," which became an initiative of K-wave export, and the story how CJ E&M decided to repeat the event, accepting a risky deficit from the first year.

This article, "CJ E&M: Creating a K-Culture in the U.S.," contains the venture story of Chairman Jay Lee of the South Korean conglomerate CJ Group, who tried to take Korean cultural content to the West. Since he started his entertainment and media business in S. Korea building CGV multiplexes, the Korean film market has grown 3 times, increasing its market share from 25 percent to 60 percent within 6 years.

The case book starts with a dream of the chairman: "I have a dream that one

day world citizens see two to three Korean movies a year, eat Korean food one or two times a month, watch one or two Korean TV programs every week, and listen to one or two Korean songs every day."

The case study, co-written by Elie Ofek, professor of Harvard Business School, and Kim Sang-hoon, professor of Seoul Business School, was discussed in the Owner President Management course attended by more than 300 CEOs last Thursday.

Professor Ofek set a task for students to decide, using the same information that Chairman Jay Lee had, whether or not to invest in KCON 2013, since KCON 2012 lost money, despite a robust turnout expanding its scale beyond 2012's US\$1.1 million budget.

KCON 2012 was a deliberate success in targeting the right consumer layer, American teens who were all passionate fans of Hallyu. Effectively utilizing digital marketing, CJ E&C sold two times more tickets than anticipated.

After having a heated debate, most executive students who are either the

founders of medium enterprises or CEOs, voted for the chairman's decision to make a long-term investment to lead the next KCON to promote the globalization of Korean pop culture in the U.S.

The vice president of the CJ Group said that the participants were interested in the entrepreneurship of a private company which was passionately devoted to spreading a nation's culture and art abroad.

This is the first time for Harvard Business School to introduce the Korean cultural content business in a case study, though it frequently quoted some successful Korean manufacturing firms.

CJ predicts that the recent case study can be linked to other chances for international MBA Schools to adopt CJ's story for their class materials.

The chairman said, "Cultural industry is the kernel of economic growth. Korea will develop and produce trend-setting content for global society." His faith motivated his company to move on to globalize Korean pop culture while risking a deficit. 

by Mary Park

Expansion in China

E-Land to Construct Integrated Logistics Center in Shanghai



THE E-LAND GROUP



The E-Land Group is preparing to construct an integrated logistics center and training institute in Shanghai.

On Jan. 30, the company had the ground-breaking ceremony for its second complex logistics center in Shanghai. It will have a floor space of 440,000 square meters, or roughly the size of 60 football fields.

Investing a total of 20 billion won (US\$182.52 million), the four buildings that make up the second complex logistics center will be built in stages by 2018. Yearly shipments handled by the center will reach 330 million units based on the standard of fashion apparel, which is more than four times the size of the current logistics facility.

The existing logistics center in Shanghai supplies products to destinations in China. However, the second center will supply products not only to Taiwan and Hong Kong, since the company has recently entered those markets, but also throughout the rest of Asia.

Also, the second center will have a training institute that can accommodate up to 2,000 employees. So, the institute can also be used as a technical support center to educate some 30,000 Chinese employees, as well as those from Southeast Asia.

An official from E-Land said, "This is the largest-ever logistics center approved by local authorities for a foreign company, and it also functions as R&D and education centers. The company has secured the foundation to spread the 2nd and 3rd success stories in China throughout Asia. This is the decision of Chairman of the E-Land Group Park Sung-soo who made an investment, looking at the bigger picture."

In the meantime, E-Land will have the first gold medal for the Nobel Prize in Economic Sciences ever to be sold at auction.


The E-Land Group announced on March 1 that it had the winning bid for the Nobel Prize gold medal awarded to the economist Simon Kuznets, which had been sold at the Nate D Sanders Auctions

in California.

Kuznets was awarded the prize in 1971 for his actual analysis of the theory of a national income and the statistics of a national income.

He was the first to introduce the concept of gross domestic product (GDP), which is used all over the world today.

An E-Land Group representative said, "E-Land has been collecting the world-class level of valuable articles, which have value of possession, in various sectors for a long time. It will both encourage young scholars longing for a Nobel Prize in academia and give an opportunity for children to dream, who are the future of the country. In the long-term perspective, the company is securing precious assets that will be the cultural heritage of humanity."

The E-Land Group is planning to build 10 to 15 museums by sector in the theme cities of the future, and will display the Nobel Prize in one of them. 

by Jung Suk-ye

Battery Relationship

BMW Develops Future Batteries with Samsung SDI

SAMSUNG SDI



BMW announced that it is developing future batteries with Samsung SDI. Also, it will use a Samsung SDI battery in its PHEV model of the BMW 3 series.

During its annual press conference in Munich, Germany, on March 18 (local time), BMW Automotive Group's purchasing division head Klous Draeger said, "We are in a very good relationship with Samsung. Last year, we signed an MOU for long-term cooperation with Samsung. Currently, we are developing future batteries together."

He continued, "We are not sure if we would cooperate with other companies in the future. The only thing we are certain of is that we are in good cooperating relationship now. In five or 10 years, if we produce too many electric cars and demand exceeds supply, only then might we consider getting batteries from other companies. At the moment, we have no plan to get batteries from other firms."

This is a very rare case that a high-ranking executive in the BMW Group mentioned particular batteries in an annual

press conference. The industry believes that the BMW Group is working hard for cooperation with Samsung SDI.

Draeger said, "We will use Samsung SDI's batteries in our plug-in hybrid electric vehicles based on its compact sedan 3 series next year."

In July last year, Samsung SDI signed an MOU with BMW Group at BMW Driving Center on Yeongjong Island, Incheon, to supply electric car batteries worth trillions of won in the medium and long term. At that time, the two companies mentioned only the supply deal of Samsung SDI batteries for BMW's i3 and i8 models.

Samsung SDI is also currently supplying electric vehicle batteries to Chrysler and Mahindra of India. 



Full Supporter

Korean Auto Parts Manufacturers Selected as GM's Business Partners

GM Korea announced on March 8 that they awarded the Supplier of the Year prize to 78 companies in Detroit on March 5 (local time). The winners included 28 Korean auto parts suppliers such as Keyyang Precision, Yeonghwa Metal, Autogen, and Wooshin Systems.

The Supplier of the Year awards ceremony marked its 23rd anniversary this year. Korea has been home to the largest number of winners, aside from the United States, for seven consecutive

years. GM Korea has assisted in Korean auto parts suppliers' overseas business with exhibitions and business meetings in markets where GM's manufacturing facilities are located such as China, Uzbekistan, Russia, Thailand, and Brazil.

"The Korean firms' accomplishment shows their importance as GM's global partner," said GM Korea, adding, "We will continue providing full support for their overseas business." 

Hybrid Excellence

SsangYong Motor Unveils Environmentally Friendly Tivoli EVR Concept



Ssangyong Motor has showcased the Tivoli along with its environmentally friendly concept Tivoli EVR at the 85th Geneva International Motor Show.

The Tivoli Electric Vehicle with Range Extender (EVR) uses eco-friendly

electric vehicle technology, the company said.

The side panel of the body is made of carbon fiber, achieving a very low weight. The front bumper and the rear carbon diffuser, which minimize the air resistance

coefficient, also have improved efficiency.

The Tivoli EVR features a small gasoline engine, a 95kW motor, and a 25kWh lithium-ion battery. It is possible to travel 130 kilometers on EV mode and 500 kilometers on “range extend” mode. It has a maximum speed of 150km/h, while it emits carbon emissions of only 35g/km.

SsangYong Motor is planning to open a European office in Frankfurt, Germany and expand its sales locations to 700 all over Europe.

SsangYong Motor CEO Lee Yoo-il said, “By sequentially launching the Tivoli by region in the future, we will strengthen the brand power of SsangYong Motor not only in the European market but also in the global SUV market.” 

New Financial IPO

Mirae Asset Securities to List U.S. Buyback ETN on March 3

Mirae Asset Securities will make an IPO of U.S. Buyback ETN(H) with the theme of treasury stock repurchasing on March 3.

Accordingly, the number of products will increase to 11 with the listing of the Mirae Asset U.S. Buyback ETN(H), up from 10 products listed when the ETN market opened in November last year.

The Mirae Asset U.S. Buyback ETN is the first local listed product in Korea that has the theme of treasury stock repurchases based on the S&P 500 Buyback Index as the underlying assets.

The S&P 500 Buyback Index is designed to measure the performance of the top 100 stocks with the highest buyback ratios over the past 12 months in the

S&P 500. The S&P 500 Buyback Index is equal-weighted and rebalanced.


In the past year, as of Jan. 30, the S&P 500 Buyback Index had exceeded the S&P 500 Index, which is the benchmark index, by 3.6 percent.

This ETN is designed to be the first product listed in the Korean stock market that follows the basic index, the S&P 500 Buyback Index, regardless of the underlying asset's currency value fluctuations.

Mirae Asset Securities is forecasting that the product will meet the investment demands of both leading companies in the U.S. and companies which repurchased treasury stocks.

An official from the company said, “In advanced countries, including the



U.S., the flow of stock prices of the companies, which reacquired its own shares, is exceeding the earning rate of the market. Therefore, the relevant investments are rapidly on the rise. In Korea, the relevant investment demands are expected to increase from investors, who pursue more than the market profit rate as well.” 

Uzbekistan Gas Plant

Hyundai Engineering Wins Contract Worth 3 Trillion Won



Hyundai Engineering signed a contract to take on the Kandym Gas Plant project in Uzbekistan worth US\$2.66 billion (2.9 trillion won).


The project is to build an 8.1 billion

square meter facility for processing natural gas from the Kandym gas field, which is about 520km southwest from Tashkent, the capital of Uzbekistan.

The total amount for the project is

US\$2.01 billion, which includes engineering, procurement, and construction. It is scheduled to be completed by the second half of 2018.

Hyundai Engineering made a much stronger position in the plant market of Central Asia by closing this contract.

Hyundai Engineering first entered the Uzbekistan plant market in 2011 by obtaining orders of front end engineering design (FEED) services worth US\$230 million for Kandym Gas Field development. Since then, it has raised awareness through successful project completion, and conducted a total of five projects worth US\$4.098 billion so far, including this one. 

Transport Logistics

Logistics Business of Samsung SDS Showing Rapid Growth

Samsung SDS is increasing its presence in the transport logistics industry by expanding its fourth-party logistics segment based on its business associated with the parent Samsung Group.

According to industry sources, the logistics business unit of Samsung SDS recorded 2.4 trillion won (US\$2.1 billion) in sales last year. The amount is highly significant in that it had stood at 500 million won or so in 2011, 627.6 billion won in 2012, and 1.8359 trillion won in 2013. In addition, the ratio of the business unit's sales to the gross sales of Samsung SDS increased from 10 percent to 26 percent,

and then to over 30 percent between 2012 and 2014.

At first, Samsung SDS was an IT service provider. The company set foot in the distribution industry in 2011, when it developed the logistics IT platform Cello at an investment of more than 100 billion won (US\$89 million). Samsung SDS has since added transport logistics to Cello's portfolio, while maintaining its major focus on B2B services. The platform provides optimal solutions in connection with global distribution companies without requiring any transportation vehicles or loading docks.



The Cello logistics platform.

Samsung Electronics has adopted the Cello platform for its own physical distribution in Southeast Asia, Europe, and North America, and is planning to do so in Latin America this year. It is also planning to sell the service to third parties. The idea is to add 500 billion won (US\$445 million) each to its logistics business sales associated with the Samsung Group and third parties within two years. According to stock market analysts, the logistics business division of Samsung SDS is forecast to record 3.2 to 3.4 trillion won (US\$2.8 to \$3.0 billion) in sales this year.



Heraclace

Kolon Sport Certified to Have World's Toughest Shoelaces By Guinness



Representatives of the Guinness World Records and Kolon Sport pose with shoes laces with award-winning laces.

After they lifted 714 kilograms, Kolon Sport's "Heraclace" shoelaces entered the Guinness Book of Records as the world's longest and toughest shoelaces.

Recognized for its tensile and abrasion forces, the Heraclace shoelaces were offi-

cially certified as The Toughest Shoelaces in the world by Guinness World Records (GWR).

The Heraclace is a shoelace made of Heracron, a fiber that offers ultimate high strength, developed by Kolon Industries.


After the product was certified by the Korea Record Institute for the best

record in Korea last year, it also officially received the certification as The Toughest Shoelaces in the world through the GWR ceremony this time.

Attended by 50 participants, including GWR official record examiner Sam

Mason and Kolon Sport executive director Yoon Jae-eun, the GWR ceremony that certifies the Kolon Sport's Heraclace took place at the Kolon Industries office in Gangnam on March 4.

Along with it, Kolon Sport released its hiking boots "High Max" accompanied by the Heraclace. The High Max allows customers to save people using its shoestring in emergency situations while involving in outdoor activities.

Made with Gore-Tex, which offers the unique combination of durably waterproof protection and breathable comfort, and Ortholite insoles, which provides the balance of moisture wicking and anti-odor properties, the High Max offers pleasant and comfortable wearing feeling. 

Solar Cell Exports

Shinsung Solar Energy to Supply 1,223MW Solar Cells to US SunEdison

Shinsung Solar Energy (www.shinsung.co.kr) signed a contract to supply additional solar cells to U.S.-based SunEdison after it closed a deal in April 2014.

Beginning this year, Shinsung Solar Energy is to supply 1223MW of its high efficiency monocrystal solar cells for three years until 2017. It is enough solar cells to provide electricity for nearly 400,000 households via 3kW of photovoltaic generating facilities.

After Shinsung Solar Energy signed a 3-year contract with SunEdison to supply 660MW solar cells in April 2014, it has been stably providing the solar cells.


Investing 14 billion won (US\$12.4 million) last year, the company is currently building additional facilities to mass-produce high efficiency products. In January, SunEdison made a paid-in capital increase in a third-party allocation for investment of US\$2 million (2.1 billion won) in Shinsung Solar Energy.

As one of the top three solar energy developers in the U.S., SunEdison is the leading solar energy company that manages everything related to solar energy, from the construction of plants to follow-up services.

An official from Shinsung Solar Ener-



Lee Wan-geun (left), chairman of Shinsung Solar Energy, stands with David Ranhoff (right), senior vice president of solar materials for SunEdison.

gy said, "The solar energy market in the U.S. is growing explosively, and we are receiving continuous inquiries due to anti-dumping of China and Taiwan." 

Sales Expansion in China

Nongshim's Ramen Sales Reach All-time High of US\$180 Million in China



Chinese tourists hold Nongshim ramen products in Chun Dan park, Beijing, China.

Nongshim's sales hit a record high in China, the largest ramen market in the world, last year.

The company announced that Nongshim China, its local subsidiary in China, saw a 28 percent growth in sales last year from the previous year, reaching an all-time high of US\$180 million (195.43 bil-


lion won). Its figure accounts for 37 percent of the company's global gross sales of US\$490 million (531.99 billion won).

The Korean ramen market faltered last year, shrinking to the 1 trillion won level after it surpassed 2 trillion won in 2013. However, Nongshim is seeking a breakthrough with exports to overcome a slump in the domestic demand.

In particular, Nongshim's strategy to focus on the Chinese western market from early last year was effective. Deviating from the east coast metropolitan

areas including the existing Beijing and Shanghai markets, the company expanded the supply of its products to western areas such as Chongqing, Xi'an, and Chengdu.

The online market also played a role in the sales growth. From last year, the company entered the e-commerce business based on Alibaba, the largest e-commerce company in China, and its sales grew 125 percent in the sector after a year of operations.

This year, Nongshim is planning to strengthen its sales organization in the Southeast China regions with strong growth potential, including Suzhou, Hangzhou, and Nanjing, and expand the sales network to the southwestern regions like Sichuan, Guizhou, and Hunan. 

Alliance with Eli Lilly

Hanmi Pharmaceutical Signs Tech Export Contract Worth 780 Billion

Hanmi Pharmaceutical has signed a contract with Eli Lilly and Company to export its autoimmune disease technology and cooperate for the development and commercialization of its oral Bruton's tyrosine kinase (BTK) inhibitor, HM71224.

Under the contract, Lilly will receive worldwide rights to the molecule for all indications of HM71224, except in China and Korea, and proceed with clinical development, regulation, manufacturing, and commercialization.

Hanmi will receive an initial payment of US\$50 million (56 billion won) and can receive up to an additional US\$640

million if certain milestones are achieved in clinical development, regulation, and commercialization. After the treatment is commercialized, it is eligible for additional double-digit sales royalty payments.

The agreement is subject to approval of the U.S. Fair Trade Act when the technology, which surpasses a certain scale, is adopted.


This small molecule is ready to enter Phase II, and Hanmi Pharmaceutical and Lilly plan to investigate HM71224 for the potential treatment of rheumatoid arthritis, systematic lupus erythematosus, nephritis, and Sjogren's syndrome.

Thomas Bumol, Ph.D. and senior vice



Hanmi Pharmaceutical's headquarters building in Songpa-gu, Seoul.

president of Lilly, said, "Lilly is making every effort to satisfy patient expectations in new treatments."

Lee Kwan-soon, CEO of Hanmi Pharmaceutical, said, "We were reassured that HM71224 could open a lot of new possibilities as a novel treatment for immunization diseases, including rheumatoid arthritis, through a clinical trial in Europe." 

Affinity Survey

Favorite Businessmen, Politicians Among Koreans Identified



Roh Moo-hyun (left) and Lee Kun-hee (right).

A survey has shown that the most popular businessman among Korean is Samsung Group Chairman Lee Kun-hee.

Gallup Korea announced on March 12 that 34 percent of the respondents said Lee Kun-hee, chairman of the Samsung Group, is their favorite businessman in Korea. They surveyed 1,700 Koreans aged 13 and older from Oct. 2 to 29 last year.

Even in a survey conducted in 2004, Chairman Lee Kun-hee ranked 1st, winning 17 percent of the votes. In this latest survey 10 years later, he gained more than twice as many votes as before.

The late Hyundai Group Honorary Chairman Chung Ju-yung ranked 2nd, accounting for 20 percent of its votes, followed by Samsung Group Founder Lee Byung-chul with 5 percent, Hyundai Motor Group Chairman Chung Mong-koo with 3 percent, and Former Hyundai Heavy Industries Chairman Chung Mong-joon with 3 percent.

Daewoo Group Founder Kim Woo-joong, the late Yuhan Corporation Founder Yu Il-han, AhnLab founder Ahn Cheol-soo, and former KT Chairman Lee Suk-chaе accounted for 2 percent each, while LG Group Chairman Koo Bon-moo accounted for 1.5 percent.

Gallup Korea said, “Two of the Samsung Group and three of the Hyundai Group made the top 5. Particularly, Samsung Group Chairman Lee Kun-hee led the Samsung Group right before checking into a hospital last year, expanding his existence from before.”

Meanwhile, in the survey on favorite politicians, former President Roh Moo-hyun came in first with 32 percent, beating former President Park Chung-hee.

Former President Park Chung-hee came in second with 28 percent, former President Kim Dae-jung third with 16 percent, President Park Geun-hye fourth with 5 percent, former President Lee Myung-bak fifth with 3 percent, former President Chun Doo-hwan sixth with 1.9 percent, former President Kim Young-sam seventh with 1.6 percent, and former Presidents Roh Tae-woo and Lee Seung-man eighth with 0.8 percent each.

Compared to the survey in 2004 when former President Park Chung-hee took the first rank with 48 percent and former President Roh Moo-hyun accounted for only 7 percent, the result is a huge change. ^{OK}

45th Anniversary

Chairman Cho Says Hanjin Group to Become Global Airline at 50th Anniversary



Cho Yang-ho, chairman and CEO of Korean Air

Celebrating the 45th anniversary of its founding, Cho Yang-ho, chairman of the Hanjin Group, emphasized the founding ideas of “making Korea the global leader in the international transportation industry,” and said, “In five years when we mark our 50th anniversary, we will jump up to be a top-notch airline.”


Cho stressed, “The founding idea means the company’s social responsibility and contributions to the country. When all the employees in Korean Air work towards a common goal with one accord, we will surely be able to pull off the vision for the 50th anniversary.”

As the chief organizer of the 2018 PyeongChang Olympics, he said, “As there is no guarantee that an Olympic medalist can win a medal in the next Olympics, the business environment is changing every day. Don’t be content with the present, but develop our competitiveness ourselves.”

As Korean Air is continuously introducing the next-generation high efficiency planes, it will increase the number of planes to more than 180 by 2019.

The company is also planning to expand the flights to 140 cities around the world by 2019, actively targeting the global airline market.

Korean Air was established in 1969, taking over the government-run Korean Air Lines with eight airplanes. In the 1970s, it opened air lines to the Pacific, Europe, and Middle East, helping Korean industries spread throughout the world. In particular, Korean Air led the establishment of the global airline alliance SkyTeam in 2000, becoming a leader in the international aviation industry.

Cho joined Korean Air in 1974 and worked in business departments including maintenance, materials, planning, IT, and sales. He was named president in 1992, chairman of Korean Air in 1999, and chairman of the Hanjin Group in 2003. 

Best Content in Asia

CJ Discusses Cooperation in Cultural Content with Saudi Arabian Prince Al Waleed



CJ Group Chairman Sohn Kyung-shik and Kingdom Holding Company Chairman Al Waleed bin Talal speak about a mutual partnership at the KHC headquarters in Saudi Arabia on March 8 (local time).

Through a strategic partnership, CJ Group is to establish a cooperative relationship with Kingdom Holding Company (KHC), a private investment company, in the cultural contents sector.


On March 8 (local time), CJ Group Chairman Sohn Kyung-shik met with the KHC Chairman Al Waleed bin Talal at their headquarters in Saudi Arabia and agreed with the need for cooperation between the two companies in the cultural industry, including in content.

Chairman Al Waleed showed his interest in the CJ E&M businesses, saying, "Let's talk about the E&M area first. Then, expand it to other business lines, including distribution, in the future. Let's find the area of not only investment but also cooperation business wise."

Chairman Sohn said, "As the best content company in Asia, CJ Group will be the best partner of the KHC to advance into Asia. I expect synergy effects based on the abilities of the two companies."

The CJ Group said that this investment is a follow-up measure after President Park Geun-hye met with Chairman Al Waleed on March 4, introduced the efforts of Korea to foster its cultural industry, and asked him to invest during her four-nation visit to the Middle East.

Meanwhile, the KHC is a global private investment company with assets worth US\$1.2 billion. It is currently investing in not only prestigious companies such as Citi Group and Apple, but also the media industry, including Disney, Twitter, and News Corp.

Chairman Al Waleed owns Rotana Media Services, which is the largest media group in the Middle East with 12 television channels, radio stations in 4 countries, a record label, and magazines as its subsidiaries. 

Rich in Stock

Many Samsung CEOs Own 1 Billion+ in Stock, But No LG Electronics CEO Does

Aside from the families of business group founders, Choi Ji-sung, vice chairman and head of the Future Strategy Office at Samsung Group, topped the list of richest professional CEOs by stock value.

According to the evaluation of professional corporate management conducted by the Korea CXO Institute based on the top 100 groups' business reports, Vice Chairman Choi pos-

sesses 6,400 shares of Samsung Electronics' common stock. Its estimated value is 9.3248 billion won (US\$8.26 million).

In 2011 and 2013, LG Household & Health Care Vice Chairman Cha Suk-yong ranked 1st. His stock value amounted to 16.3 billion won (US\$14.43 million) in 2011 and 25.1 billion won (US\$22.23 million) in 2013. In 2012, however, Shinsegae Chairman Koo Hak-seo took 1st place with a valuation of 24.5 billion won (US\$21.7 million).

This year, Kim Seong-sik, former advisor of Samsung Electronics, ranked 2nd with a value of 6.83187 billion won (US\$6.05 million). Samsung Electronics President Cho Soo-in came in 3rd with a value of 4.56478 (US\$4.04 million). Samsung Electronics Executive Director Park Byung-ha is 4th with 4.51961 billion won (US\$4 million) in stock, and Samsung Electronics Samsung Electronics Vice Chairman Kwon Oh-hyun is 5th with 4.371 billion won (US\$3.87 million) in total.

KT&G President Min Young-jin took 6th place with a value of 3.99640 billion won (US\$3.54 million), followed by CJ Cheil Jedang Vice President Lee Jae-ho with 3.95442 billion won



CJ Group Chairman Sohn Kyung-shik and Kingdom Holding Company Chairman Al Waleed bin Talal speak about a mutual partnership at the KHC headquarters in Saudi Arabia on March 8 (local time).

In a Debt Trap**Mirae Asset Chairman Says Financial Industry Lacks Dynamics**

Mirae Asset Financial Group Chairman Park Hyeon-joo emphasized the importance of global asset allocation through a letter written during a flight to the U.S. on Mar. 2.

Park has been visiting financial investment firms all over the world for three months, starting from December last year. During this trip to Asia, Australia, Europe, and the U.S., Park sent messages to his employees about the beginning of the era of China's capitalism, and a hopeless trend of a rapid increase in debt, an unprecedented basis of low interest all around the world.

In the letter, he said, "Under present conditions, raising asset income is an important task for us, along with increasing income and reducing liabilities. If I meet a customer now, I want to tell him over and over to please trust Mirae Asset, and do global asset allocation."

He also said, "I have been keeping a low profile and focusing on the group's strategy and global businesses for years in order to significantly improve Mirae Asset's ability at asset allocations and its quality of services."

He continued, "The debt problems should be solved with income increments. Also, economic growth and the improvement of asset income is needed. The unprecedented low interest around the world shows that there are great inherent dangers economically and socially. We are now caught in a Debt Trap, and increasing debts are bound to bring on a crisis."




Park Hyeon-joo, chairman of Mirae Asset Financial Group.

Park also added, "Not only is economic growth but also the improvement of asset income needed as well. Our society should be more concerned about how to increase a return on assets through global asset management, together with debt reduction at the same time."

He argued that the difficulties of long-term investments and asset allocation overseas due to regulations should also be solved.


Park said, "Regulations lessen the dynamics of the financial industry. The regulations on insurance businesses' long-term alternative investments are excessive. If the government slightly eases the regulations on the the asset management of insurance companies, I will make all efforts to develop another business model."

Meanwhile, he also revealed his plan to strengthen international sales, arrange its manpower resources for marketing in the west and major cities in the U.S., and expand the group's equity capital to 10 trillion won (US\$9.09 billion) within three years through an IPO of its subsidiaries. 

(US\$3.5 million). Samsung Electronics Vice President An Jae-geun has 3.67018 billion won (US\$3.25 million) in stock, and Dongbu Insurance President Kim Jeong-nam is worth 3.5405 billion won (US\$3.14 million).

By major companies, LG Chem Vice Chairman Kim Ban-suk topped the list with a stock value of 3.37827 billion won (US\$2.99 million), while Hyundai Mobis CEO Jung Soo-kyung held 2nd rank with a value of 2.505 billion won (US\$2.22 million). S-Oil Vice President Kim Dong-chul came in 3rd with a value of 2.37027 billion won (US\$ 2.1 million). Kia Motors Vice Chairman Ahn Byung-mo was 4th with a value of 1.65599 billion won (US\$1.47 million). Former Samsung Electro-Mechanics President Choi Chi-joon is 5th with a value of 1.65437 billion won (US\$1.47 million). Samsung C&T President Kim Shin is 6th with a value of 1.48911 billion won (US\$1.32 million). Hyundai Steel President Kang Hak-seo is 7th with a value of 1.37 billion won (US\$1.21 billion), and Samsung Engineering Vice President Kang Sung-young is 8th with a value of 1.2654 billion won

(US\$1.12 million).

Oh Il-sun, head of the Korea CXO Institute, said, "There are a considerable number of Samsung Electronics' executives in the list. In contrast, there are no executives from LG Electronics who have stocks worth more than 1 billion won [US\$885,582.71]." 

Ssangyong's New Chair**Ssangyong Motor Appoints Choi Johng-sik as New CEO**

Ssangyong Motor has appointed the head of its Sales Planning Division, Vice President Choi Johng-sik, as its new CEO.


Before joining the company, Choi served as head of the export

division and Executive Vice President of North America at Hyundai Motor. He also served as President at China's Huatai Automobile Group, and then at the Chinese unit of Korean piano maker Young Chang.

Considering this year as the first year of the global network completion, Choi will focus on overseas marketing.

Choi should also find a solution for Russia, the largest export market of the company, experiencing a plunge in sales due to the economic recession.

As Ssangyong's new Tivoli compact crossover SUV, which was released in January, is receiving positive consumer response, he is planning to bolster sales power more actively. In particular, one of the issues he has to resolve is to negotiate and build trust with fired workers, which has been a thorny problem for a long time.

Choi will make his first debut in the Shanghai Motor Show, which will be held on April 20. Ssangyong will unveil its main Tivoli model and make inroads into the Chinese market. 



Choi Johng-sik, new CEO of Ssangyong Motor.

Deserved Promotion

Dongbu Daewoo Electronics' Vice President Lee Jae-kook Promoted to President


Dongbu Daewoo Electronics announced on March 2 that Vice President Lee Jae-kook (picture), head of the management support division of the company, was promoted to its president.



Lee Jae-kook, new president of Dongbu Daewoo Electronics.

After graduating from Andong High School and Sungkyunkwan University, the newly-elected president served as head of the Support Group, director of the North America Management Team, and director of the Home Appliance Business Management Support Division at Samsung Electronics. He also served as CEO at home appliance company Lihom and a distribution company CJ GLS. Then, he joined

Dongbu Daewoo Electronics as vice president and head of the management support division in Feb. 2013 when the company started the business.

Dongbu Daewoo Electronics said, "The promotion is for the active and preemptive actions to deal with the prolonged recession in the global market and the risks from the change of the business environment." 

New KITA Chairman

Kim In-ho: "Boom is welcome. Recession is more welcome."


Kim In-ho, incoming chairman of the Korea International Trade Association (KITA), spoke at his inaugural address on Feb. 26 and said, "Based on a deep understanding of the market and the companies, I will try harder to communicate with member companies."

He addressed the assembled staff members by saying, "As I have run a private research institute for a decade, I have taken the responsibility for employees' lives and have also adapted the market. With a modest attitude, I will listen attentively to your opinions."

Kim added, "Even though we are facing the crisis, this is the time for us, the traders who made Korea a trading nation at any cost, to make a leap once again. Also, this is the time we can make it."

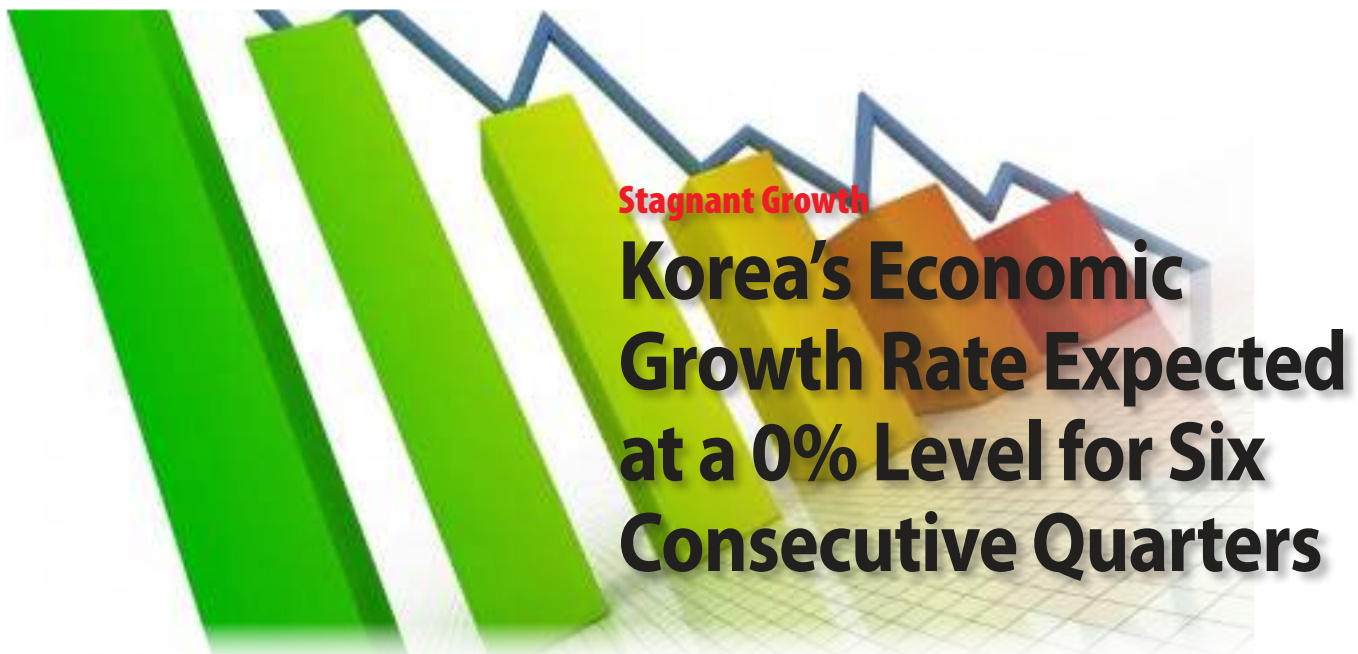
He cited the remark of Konosuke Matsushita, who is known as the "god of management" in Japan, "Boom is welcome. Recession is more welcome."

Kim also said, "In order to help small and medium enterprises expand overseas and globalize, I will come up with various support measures. I will seek out an export expansion plan using new trading methods, including e-commerce, merchandising, and processing trades."

Kim began his career in 1967 as a government official at the then-called Economic Planning Board (currently the Ministry of Strategy and Finance), and served in major policymaking posts until 1997, including the positions of General Director for Price Policies, General Director for the Economic Planning Division, and Assistant Minister. He served as a senior presidential secretary for economic affairs during the Kim Young-sam administration in 1997. 



Kim In-ho, the new chairman of the Korea International Trade Association, speaks at his inaugural address on Feb. 26.



Although the Bank of Korea (BOK) predicted in the beginning of the year that the economy will turn around in the first quarter, overcoming the poor performances in last year's fourth quarter, it is, however, continually showing a poor real economic index in the beginning of the year.

With poor real economic indicators continuing, the South Korean economic growth rate is expected to show zero percent growth for six quarters in a row, as the rate is likely to stay at the zero percent level in the first quarter.

One official from a private economic research institute said on March 15, "The growth rate of the first quarter compared to the previous quarter is expected to stay at a zero percent level, as the indices such as the industrial product and export indexes were poor in the beginning of the year along with deteriorating consumer sentiment." The official added, "If the growth rate stays at the zero percent level even with the base effect from the fourth quarter of last year, which showed a low growth rate, it means that the national economy is going through a considerable hardship."

Specifically, the industrial output in January dropped by 1.7 percent and, in particular, the reduction in mining and manufacturing industries was the greatest since the financial crisis in 2008 with 3.7 percent. Exports decreased 0.7 percent and 3.4 percent in January and February, respectively, and consumption also reduced 3.1 percent in January. The consumer price index in February was 0 percent for three consecutive years, recording negative growth except for 0.58 percentage points from the cigarette price increase. It means that the economy has moved one step closer to deflation, in which prices turn downward and business slows down. According to Nielsen's recent consumer confidence survey, Korea's consumer confidence index fell from 52 to 48 between the third and fourth quarters of last year. The only country lower was Italy, recording 45.

According to a survey of 34 economists from private and

national research centers, academia, and financial institutions conducted in early February, 64.7 percent of them say that the Korean economy is in crisis. They also said that the growth rate of the economy this year would not reach the forecast of the Bank of Korea of 3.4 percent, let alone the forecast of the government of 3.8 percent.

Domestic and foreign economic research institutes, which reported South Korean economic growth at rates from mid to late 3 percent, are working to lower or change the growth rate predictions. The BOK changed the growth rate to 3.4 percent in January. The Korea Institute of Finance (3.7 percent), Korea Economic Research Institute (3.7 percent), and Hyundai Research Institute (3.6 percent) are also looking to lower their predictions.

Foreign institutes already lowered South Korean growth rates one after another. The IMF lowered the growth rate to 3.7 percent from the original 4.0 percent. Nomura Securities lowered it to 2.5 percent from the original 3.0 percent on March 10, giving out a 2 percent level growth prediction for the first time. Deka Bank lowered the growth rate prediction from 3.3 percent to 3.0 percent, Moody's Corporation from 3.4 percent to 3.0 percent and IHS Economics from 3.1 percent to 3.0 percent, respectively.

Under the circumstances, Korea's central bank unexpectedly slashed its key interest rate by a quarter of a point to a record low of 1.75 percent on March 12. It is reportedly to prevent the nation from falling into deflation and to support economic growth even at the expense of spurring household debt, which was already at 163 percent of disposable income in 2013.

"The Korean government recently cut the key rate to below 2.0 percent, and has come up with a series of economic stimulus measures, but the consumer confidence index of Korea showed no signs of improvement at all," Nielsen Korea explained, adding, "This means the domestic economy could be mired in a long-term recession."

by Jung Suk-ye

Overseas Banking

KEB Ranks 1st in Overseas Business Performance, Trailed by Woori, Shinhan Banks



ATMs of several of the banks in Korea. From left to right - Kookmin, Nonghyup, Shinhan, and Woori banks.

Among domestic banks, Korea Exchange Bank (KEB) recorded US\$134 million (150.62 billion won) in operating profits, which is the highest, followed by Woori Bank with US\$124 million (139.38 billion won) and Shinhan Bank with US\$117 million (131.51 billion won).

According to the Financial Supervisory Service, domestic banks, including the development bank and the export-import bank, have a total of 109 branches in 36 countries around the world, with overseas assets of US\$87.334 (98.16 trillion won). They recorded US\$629 million (707 billion won) last year and US\$450 million (505.8 billion won) in 2013 in operating profits.

KEB, which ranked 1st, possesses 25 overseas branches with overseas assets of US\$18.174 billion (20.43 trillion won). Its operating profits amounted to US\$134 million (150.62 billion won) last year.

Woori Bank, which ranked 2nd, has 22 overseas locations with overseas assets of US\$14.672 billion (16.49 trillion won), while it recorded US\$124 million (139.38 billion won) in operating profits. Except for KEB, which was a bank exclusively responsible for foreign exchange in the past, Woori Bank comes first.

The 3rd ranked Shinhan Bank has 18 branches with overseas assets of US\$17.138 billion (19.26 trillion won) and its operating profits totaled US\$117 million (131.51 billion won). Government-run Korea Development Bank achieved US\$105 million (118.02 billion won) in operating profits last year through its 13 overseas offices and overseas assets of US\$13.992 billion (15.73 trillion won).

Kookmin Bank, which has 9 branches with overseas assets of US\$4.558 billion (5.12 trillion won), recorded US\$27 million

(30.35 billion won) in operating profits. Hana Bank, which has 7 branches with overseas assets of US\$10.773 billion (12.11 trillion won), recorded US\$39 million (43.84 billion won) in operating profits.

The Industrial Bank of Korea has 7 branches with overseas assets of US\$6.241 billion (7.01 trillion won) and recorded US\$72 million (80.93 billion won) in operating profits, while the Export-Import Bank of Korea has 4 branches with overseas assets of US\$1.086 billion (1.22 trillion won) and recorded US\$8 million (8.99 billion won) in operating profits. Also, NH Nonghyup Bank has 2 overseas branches with overseas assets of US\$477 million (536.15 billion won), and recorded US\$2 million (2.25 billion won) in profits.

Meanwhile, the number of domestic banks' overseas branches has decreased by 9, compared with 114 branches in 27 countries in 1998 right after the Asian financial crisis in 1997. By 2005, the number decreased by 88, but it is now gradually increasing. As more domestic banks are rushing into the overseas expansion, the number will rise sharply.

The reason why banks try to go abroad is that there are growing concerns over profit aggravation due to low interest and low growth. Some say that the government is carrying out a policy that forces banks to take constant risks in order to address household debts, and it is aggravating the profits of banks even further.

Under the circumstances, some point out that the banks which expanded overseas are discoloring the purpose of globalization, since they are focusing more on domestic companies overseas and overseas Korean nationals rather than local companies or people.

by

by Jung Suck-ye

Inaugural Words

Shinhan Bank President Pledges to Solidify Status as Leading Bank



Newly-appointed Shinhan Bank President Cho Yong-byoung.

Shinhan Bank welcomed a new chair. Cho Yong-byoung, who took office as president on March 18, in his inauguration speech, emphasized, "I will solidify our status as a leading bank."

Cho said, "Through ceaseless innovation, we must create new opportunities and values and maintain the highest level of profitability and soundness."

He continued, "I will also play a leading role in synergy creation of the group. I will actively seek win-win measures through the organic cooperation between subsidiaries of the group, and improve the competitiveness of the group's focused businesses, including future plans, WM and CIB."

He also said that he would strengthen the company's global capability and smart banking competitiveness, saying, "While strengthening our existing sales networks in growing markets such as Vietnam and China, I will make inroads into new developing markets which have high growth potential. In the fintech era, I will secure differentiated competitiveness to lead smart finance."

Cho added, "While making efforts to develop innovative banking services, which is highly convenient to users, I will secure a dominant position in the online payment market. Through strategic partnerships with ICT companies, I am planning to steadily make new business opportunities."

Meanwhile, Shinhan Bank was recognized on March 19 as the Best Domestic Bank in Korea and Best Channel Convergence Bank in Asia by Asian Banker in its evaluation of consumer banks in the Asia Pacific, Middle East, and Africa regions.

The Asian Banker selects the best bank in each country every




Shinhan Bank executives accept awards from Asian Banker personnel.

year after it analyzes financial results, including the market share of core products and risk in the retail banking sector, and non-financial results, including core strategy, products, and services.

The Asian Banker announced that Shinhan Bank received high marks in every sector, including customer-centered products and services, consumer protection such as preventing customer private information leaks, customer satisfaction, small-loan finance, and small business support, along with its superior financial performance.

In particular, Shinhan Bank was selected as the best Asian bank in the channel convergence sector for the first time in Korea. The bank has drastically improved customer financial transaction procedures through the organic relationship between online channels and offline store channels.

An official from Shinhan Bank said, "We have won the best awards in the retail sector for six consecutive years from 2009 and four consecutive years from 2012. We will turn into a bank with internationally well-recognized competitiveness in the future." 

by Jung Yeon-jin

Excellence in STP

NH Nonghyup Wins STP Excellence Award for 2 Consecutive Years




NH Nonghyup Bank Vice President Yoon Dong-ki (right) poses with an HSBC representative while holding the company's new STEP Excellence Award.

NH Nonghyup Bank (President Kim Ju-ha) was selected as a top company in processing foreign currency remittances in 2014 and received the STP Excellence Award from HSBC, a leading financial global services company.

The STP Excellence Award is given to banks which have high straight through processing (STP) rates every year. The STP rate measures the speed and accuracy of financial institutions on overseas remittance processing, and the higher rate means more excellence in processing foreign exchange business.

NH Nonghyup Bank has won the STP Award from many prestigious global financial institutions. In particular, the bank won the award from HSBC for two years in a row.

NH Nonghyup Bank Vice President Yoon Dong-ki said, "We will do our utmost to educate our employees and provide follow-up remittance services in order to provide quick and accurate overseas remittance services." 

Our Bank in Indonesia

Woori Bank Officially Launches Bank Woori Saudara in Indonesia

With officials from Bank Indonesia and Otoritas Jasa Keuangan, or the Financial Services Authority of Indonesia, attending, Woori Bank held a ceremony marking a merger in Indonesia on Feb. 26 and announced the official launch of a merged bank.



Woori Bank CEO Lee Kwang-goo (center) and other bank officials participate in the ribbon-cutting ceremony to open the new Bank Woori Saudara.


The official name of the merged bank is Bank Woori Saudara. The bank has total assets worth US\$1.6 billion (1.76 trillion won) and employs about 2,000 workers. Woori Bank will have a 74 percent stake in the merged bank.

Woori Bank CEO Lee Kwang-goo said, "We are here to declare that both banks have successfully completed the merger and have a new beginning together. Even though we have different backgrounds and cultures, let's lay the foundations of the merged bank's growth in the future through the integration of the two banks."

He said, "With continuous investment and support, we will grow Bank Woori Saudara into a medium and large-sized bank, contributing to the development of the financial industry and the economic development in Indonesia."

Through the merger, Woori Bank will have 185 networks in 18 countries.

Meanwhile, Woori Bank CEO Lee also signed an agreement with Bank Central Asia (BCA), the largest commercial bank in Indonesia, to join the interbank payment network of debit cards (Prima).

Joining the Prima, which accounts for 50 percent of the Indonesian ATM market with 51 local bank members, the customers banking with Bank Woori Saudara can now also use nearly 15,000 ATMs of the BCA. 

Internet Banking Abroad

Hana Financial Group to Begin Internet Banking in China, Indonesia

Kim Jung-tai, chairman of Hana Financial Group, said that the group will step up its overseas business, including Internet banking services, in many Asian countries.

In an interview with the Yonhap News Agency on Feb. 23, Kim said, "The economy and the financial environment will worsen further in the future. Due to the low interest rate environment, it is inevitable to face a low net interest margin and low



Hana Financial Group Chairman Kim Jung-tai.

earnings from fees in Korea. Therefore, we will strive to strengthen our business sales and abilities in the global market.”

Hana Financial Group, which has the largest global network among domestic financial groups, is planning to increase the share of profits from outside the country to 40 percent by 2025.


Kim also said, “We will focus on the Asian markets,

whose cultures are similar to Korean culture including China, and strengthen the abilities of local subsidiaries and offices abroad.”

Accordingly, Hana Financial Group will begin Internet banking services in China and Indonesia in the first half of this year.

Hana Financial Group launched a “1Q Bank” business trial, which offers financial services based on the Internet and mobile platforms, through Korea Exchange Bank of Canada at the end of last year. It also started the business in earnest from the middle of last month, targeting younger people.

The 1Q Bank allows customers to open an Internet account using their existing bank account information. It is also considered suitable for places lacking offline store networks.

Meanwhile, Kim has led the group successfully for the past 3 years. He was highly praised as he completed the integration of local subsidiaries abroad, including in Indonesia and China, and the integration of domestic cards smoothly last year. He will serve as chairman of the group until March 2018. 

Kangaroo Bond


IBK Issues Bonds in Australia

Industrial Bank of Korea (IBK) issued an AUD-denominated bond worth AUD350 million (US\$273 million).



The bond has a maturity of five years with a fixed interest rate of 3.25 percent, which is the lowest among all fixed-rate kangaroo bonds issued by Korean institutions.

The initial offer had been the three-month swap rate+115 bp (area), but the investment demand of over AUD570 million (US\$445 million) resulted in a 3 bp fall. This is equivalent to the three-month Libor rate+75 bp.

IBK is planning to make use of the procured funds to help small exporting firms. Earlier, IBK issued another kangaroo bond worth AUD350 million with a maturity of three years in Feb. 2012, which was a first for a Korean financial institution. 

Partnership with Fintech

KB Financial Group to Establish Fintech Hub

The KB Financial Group is establishing a “KB Fintech Hub Center” in order to partner with fintech businesses and build a systematic support system for start-ups.




Once the center is established, companies that want to partner with KB don't have to visit its banks and credit card companies individually, but can simply make a request to the center. Then, employees of the center will discuss the partnership process with the relevant subsidiary after a review. The center will allow fintech companies to improve accessibility and expand business models through partnerships with many subsidiaries.

The center will also focus on a support program for fintech start-ups. When businesses that have technology but lack funds request support, the center will provide financial support, including investments and loans, through internal review. The center will also provide non-financial support, including offering space for research and development and the test environment.

Also, the KB Financial Group will run separate remittance, payment and settlement, loans, and asset management departments for the fintech industry. The executives of these departments will hold meetings often in order to make quick financial decisions.

Therefore, constant and prompt actions on common issues, such as authentication services and partnership, will become possible.

An official from the KB Financial Group said, “KB already provided remittance services using e-mails and cellphones for the first time in Korea 15 years ago. Based on our strengths, including the development experience of information technology and a high security standard, we can realize a customer-centered smart KB.” 

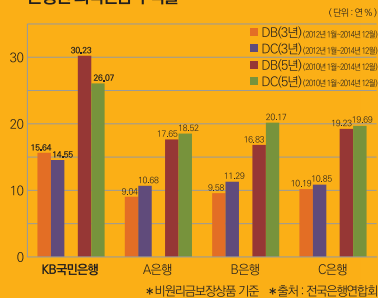
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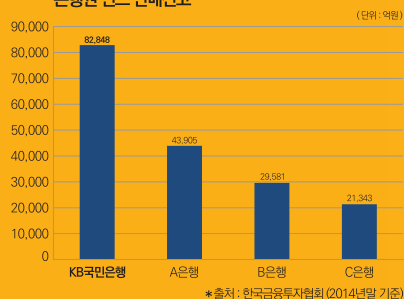
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5G Initiatives

Korea Pushes Forward World's First 5G Network Commercialization by 2020

by Cho Yeong-jin

As the International Telecommunication Union (ITU) started an official discussion on the future vision of 5G and plans to map out its frequency allocation last January, the global competition is getting intense to take the initiative in 5G networking, which is 100 times faster than 4G LTE. Korea is competing against global contenders to be the one ahead in this field.

The Ministry of Science, ICT and Future Planning (MSIP) finalized and announced the Creative 5G Mobile Strategy at a third ministerial meeting for economic issues on January 22.

The Korean government organized a 5G forum for public and private enterprises in May 2013. This time, it presented a blueprint for an investment of 1.6 trillion won (US\$1.499 billion) in research and development, standardization, and infrastructure related to 5G technology over the next 7 years, through public-private partnerships. The 5G Forum consists of SK Telecom, KT, LG U+, Samsung Electronics, LG Electronics, and Ericsson joining as members.

The government is planning to lead the effort to set a global standard for 5G technology by commercializing 5G mobile communications by 2020. In particular, since the nation is struggling in the field of communications equipment, Seoul intends to revitalize the communications equipment industry by dominating the global 5G phone market. In fact, Korea made up only 4.4% of the global communications equipment market in 2012, while China accounted for 26% in the same year, up 12% from 2007. Even though locally-made 3G communications equipment constituted 90% of the total in 2012, locally-manufactured LTE networking equipment comprised merely 30%.

The MSIP also plans to capture the top spot in the global smartphone market, occupy 20% of the global equipment market by 2020, and create 16,000 jobs. In addition, it aims to turn over 331 trillion won (US\$310 billion) from 2020 to 2026 through exports and domestic demand for 5G devices and equipment, and create a local communications service market worth 68 trillion won (US\$63 billion).

Korea is not alone in the effort. Other countries are also


engaged in public-private partnership projects to dominate the 5G market. For example, the EU, which is considered to be the first in 5G technology research, formed the 5G Public-Private Partnership Association (5GPPP) at the end of last year to accelerate the development of the fifth-generation networks. Twenty-four mobile carriers joined the association, including Ericsson, Nokia Solutions and Networks, and France Telecom. The EU is also proceeding with the METIS 2020 Project to make a mobile communications system by the year 2020. The EU announced plans to invest 50 million euros (US\$68.3 million) with the aim of commercializing 5G by 2020.

The US is also spurring the research and development of 5G technology led by private companies such as Qualcomm and ALU. Japan's NTT DoCoMo, on the other hand, successfully conducted a 10Gbps wireless test by utilizing the 11GHz band with 400MHz of spectrum in February 2013.

Early last year, China formed the IMT-2020 Promotion Group for 5G technology research. Beijing is planning to continuously increase its investment in developing 5G technology. Huawei, the top-ranked communications equipment supplier, is going to inject at least US\$600 million in the development of 5G technology over the five years.

Meanwhile, South Korea will establish a partnership with China for 5G standards. The MSIP will start a joint study with its Chinese counterpart in the first half of this year to set a global standard for 5G mobile technology.

Both nations plan to cooperate so that original technologies secured through this joint study can be included in the draft of 5G Vision, which will be announced by the 3rd Generation Partnership Project (3GPP) and the International Telecommunication Union (ITU) in June. Korea is conducting joint research also with Japan in the private sector led by the 5G Forum.

The two countries anticipate that this partnership will help East Asian countries including Korea and China show a strong presence in discussions about global communications standardization led by the U.S. and Europe. 



5G Tech Commercialization

Korean IT, Telecom Companies Edging Ahead



Secretary General Hamadoun Touré (5th from left) take a commemorative photograph after attending the 2014 ITU Plenipotentiary Conference held at BEXCO, Busan on Oct. 20, which aimed at sharing information about 5G technology and facilitating international cooperation.

On occasions of 2014 ITU Plenipotentiary Conference last October and the Mobile World Congress 2015 (MWC 2015) early March, domestic IT giants and telecommunications service providers are also accelerating the efforts to develop and demonstrate 5G technologies through their own R&D capacity or in joint with IT companies home and abroad.

In particular, Samsung Electronics and SK Telecommunications forged a partnership to lead a next-gen 5G era, and thus Korea has taken one step forward in leadership of 5G technology. Samsung has successfully developed and tested the world's first technology to transmit greater than 1Gbps of data at a maximum distance of 2km, and SK Telecom has lead global mobile communications technology, from its commercialization of CDMA in 1996 to the popularization of LTE-A in 2013. The partnership is expected to create synergy. Samsung is working on developing core technology to commercialize 5G networks by 2020. They also agreed to cooperate in the definition and selection of the frequency bands suitable for 5G. Both firms are going to lead the efforts in the research and development of 5G-based technology that are related to making next-gen small cells, high-capacity multi-I/O antennas, and next-gen modems. After that, they will jointly conduct tests.

Samsung Developing 5G 30 Times Faster 4G



Researchers at Samsung demonstrate 5G mobile technology.

Samsung Electronics demonstrated 5G mobile technology in a vehicle moving more than 100 kilometers per hour on Oct. 15.

Samsung announced that it successfully transmitted 1.2 Gbps of data without buffering in a high-speed environment that exceeded 100 kilometers per hour, after its demonstration of 5G technology at 1Gbps speeds in May 2013.

It is the industry's first successful demonstration of 5G technology in a real high-speed mobile communications environment. The Korean tech giant added that it also succeeded in delivering up to 7.5 Gbps speeds while not moving, which is 30 times faster than 4G LTE.

Thanks to this successful demonstration, Samsung will stay one step ahead in leading the efforts to set a global standard for 5G technology. 5G technology is a next-gen mobile telecommunication method faster than LTE by dozens or hundreds of times, but there is no official definition or standard yet.

SKT in Alliance with Ericsson

SK Telecom and Ericsson succeeded in connecting LTE (4G) and 5G base stations of in an actual service environment, breaking down a barrier for LTE-5G.

SK Telecom said, "We set up the mixed environment of LTE



A demonstration of effective communication between 5G and LTE base stations shows success.

and 5G base stations in Sweden and succeeded in interconnecting between the LTE-5G base stations in an actual environment.”

With the success of the experiment, SK Telecom can provide seamless high-definition video streaming services during the handover of the networks between LTE and 5G base stations. It also secured the key technology that can prevent the deterioration of the customer quality of experience during the early stage of 5G adoption, SK Telecom said.

The company is planning to advance the technology in order to verify the domestic environment for interlinking technology between LTE and 5G, and demonstrate 5G trial services in Korea by 2018.

SK Telecom Chief Technology Officer Choi Jin-sung said, “Together with Ericsson, which is the leading communication company in the world, we have reached an important milestone for 5G commercialization.”

Thomas Norén, vice president of Ericsson, said, “Along with SK Telecom, Ericsson has moved a step nearer to the world’s first 5G commercialization. We are planning to collaborate on the development of major technology and services of 5G in the future as well.”

SK Telecom also showcased the robots adopting 5G communications technology drew huge crowds at Mobile World Congress 2015.

The robots SK Telecom developed with RoboBuilder, a Korean SME, are characterized by exactly reproducing the movement of a person. They are able to do this via sensors attached to the head and the body that minimize the data transmission delay called ultra low latency to 0.001 seconds or below.

KT Introducing Innovative 5G Tech

KT will run an exhibition hall with the theme of “Life Innovation by 5G” at the world’s largest smartphone show, Mobile World Congress 2015 (MWC 2015). The MWC 2015 will be held in Barcelona, Spain from March 2 to 5.

KT has teamed up with leading mobile carriers, including AT&T and Vodafone, to showcase the world’s best 5G technologies at Innovation City, which is the theme exhibition hall of Groupe Speciale Mobile Association (GSMA), an association of mobile operators and related companies.



A mockup of the planned KT booth at Mobile World Congress 2015 in Barcelona, Spain.

The exhibition hall of KT is divided into three zones: 5G Infra, 5G Access, and GiGAtopia. In the 5G Infra zone, KT will display network technologies dubbed “10Giga Internet,” which is the basis of 5G, and “5G Ultra-Dense Network,” which allows users to use network services even in “traffic jam” areas like concert halls and hotspot locations.

In the 5G Access zone, it will display various new technologies related to 5G. KT will demonstrate a technology that makes use of the existing WiFi frequency band to LTE and 1 Gbps downloading speed by using a nine-band carrier aggregation (CA) tech, in which nine frequencies are integrated into one.

In the GiGAtopia zone, it will show movies on how numerous things will become the Internet of Things (IoT) and change people’s daily lives by setting GiGA home, GiGA shop, and GiGA school, which are based on the GiGA Infra.

Meanwhile, KT Chairman Hwang Chang-gyu will deliver the keynote speech of “The Road to 5G” at the MWC 2015, and stress the necessity of the ultra-real time and ultra-mass network.


LG U+ Installing First 5G Base Station

LG U+ has set up its first 5G network base station to create a new 5G network in Korea first.

The change is physically a small, 75cm piece of equipment that can replace existing remote radio heads (RRH) and antennas in existing LTE base stations. And it is 50 percent smaller than the equipment it replaces.

Currently, LTE base stations need separate RRH equipment and LTE antennas depending on frequency range. This setup consumes enormous amounts of electricity. Also, the frequency processing bandwidth is less than 75 MHz of spectrum by downlink, so it is impossible to realize a Gbps transmission speed.

However, the new equipment will integrate more than two LTE bands into one. It can save power consumption by nearly 50 percent compared with existing base stations.

By establishing a next-generation base station that can process 4x greater frequency bandwidth than existing ones, LG U+ believes that it can provide stable 3-band LTE-A services even in data traffic areas, including downtown and tourist attractions, and also set up the Massive MIMO, the prerequisite technology of 5G, easily. 



LG engineers test a newly-installed 5G base station.



7th World Water Forum 2015
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2015 세계물포럼조직위원회



Fighting for Mobile Payment Future

Pre-installing Google Wallet Latest Move in Cutthroat Mobile Payment Wars



by Mary park

Google is mounting a serious challenge to Apple and Samsung Electronics in the global mobile payment market. The search engine giant launched Google Pay before Apple and Samsung launched their equivalent services, but it found itself floundering. Now, Google is launching a full-scale counter-offensive in partnership with the major U.S. mobile carriers.

On Feb. 23 (local time), Google Payments Vice President Ariel Bardin revealed via googlecommerce.blogspot.com that Verizon, AT&T, and T-Mobile decided to expand the distribution of Google Wallet, in partnership with Softcard, a mobile payments venture established by the three carriers. Experts are saying that this partnership may cause a change in the dynamics of the U.S. mobile payment market, since the three mobile carriers account for more than 80 percent

of the U.S. market.

So far, Google has been unable to expand its mobile payment service in the U.S. due to Softcard. When the three carriers debuted the Softcard app, Google Wallet became a rival. The decision by the Internet search giant to acquire the mobile payment company appears to be part of its strategy to ally with the carriers.

Google's Latest Move after Several False Starts

The industry is paying attention to Samsung and Apple's responses to Google's move. The three companies compete to bring their influence over the mobile market into the mobile payment market through different technologies and strategies.

Google introduced its NFC-based mobile payment service in 2011. The service allows people to make payments

by holding their NFC-enabled Android phones with credit card information near credit card magnetic swipe terminals at affiliated stores. Google's partnership with Softcard can mean that the tech giant intends to expand its existing service by pre-installing it on Android phones, rather than releasing a new payment service.

On the other hand, Google's new Bluetooth-based payment service, Plaso, is expected to be fully fleshed out at Google I/O 2015. It will be possible to conveniently use the service without touching mobile devices to credit card terminals at affiliated stores, since it can recognize users' smartphones and make payments automatically.

Samsung's Responses

Samsung is also gearing up to unveil its own payments service after it recently bought U.S. mobile payments company

LoopPay. Related to that, Samsung Electronics Vice Chairman Lee Jae-yong reportedly met PayPal founder Peter Thiel at the Hotel Shilla in Seoul on Feb. 24 and discussed ways to cooperate in investments into fintech and electronic payment systems.

Industry analysts expect that the Korean tech giant will feature a new payment service on the Galaxy S6, which was showcased at this year's MWC. The new mobile payment system made by LoopPay sends magnetic information stored in credit cards via a magnetic field. People will be able to use the service at stores with magnetic card readers, and thus mobile payment terminals won't be necessary. However, separate terminals will be needed for those with smart card readers to make the service available.

According to Samsung, Samsung's mobile wallet solution will be usable at 10 million stores, which constitute 90 percent of the total while Apple Pay are available at 27 stores in the U.S. right now, but

Apple's Strategy

Apple Pay was rolled out in October of last year, and Apple is expanding the use of the service to Apple Watch in addition to the iPhone models. A million cards were registered for the mobile payments system just three days after its introduction. In particular, Apple Pay is expanding its influence, as it is used in an increasing number of apps, including taxi service app Uber and social commerce app Groupon.

As in the case of Google Wallet, Apple's mobile payments solution is based on NFC technology. Once a credit card terminal and a mobile device recognize each other, the payment system encodes and sends user payment information to payment terminals. When the iPhone of the user who previously requested mobile payments finds a payment terminal nearby, the iPhone's NFC module begins to operate. The iPhone and the payment terminal are connected after the iPhone is asked for a connection by the payment terminal. Then, the mobile device opens its communications window and exchanges payment information. A growing number of people are using Apple Pay, helped by

the huge popularity of the iPhone 6 and iPhone 6+. Nevertheless, the problem is that the service is only available in stores with NFC-enabled payment terminals equipped to handle iPhones. Apple is in partnership with 750 banks in the U.S. to make this possible.

Current Standings

Google started its mobile wallet solution in 2011, but it is showing mediocre performance. PayPal made up 78 percent of all digital payments in the U.S. as of November 2014, Google Wallet 4 percent, and Apple Pay 1 percent. However, observers say that Google Wallet lags behind Apple Pay in the market, since Apple's payments service has been logging strong growth after its release on October 2014.

Apple announced last January that its mobile payments system represents more than two thirds of all contactless mobile payments in the U.S. using Visa, MasterCard, and American Express credit cards. Data released by market research company eMarketer shows that 1.6 million consumers in the U.S. used mobile payment services last year, which totaled US\$3.5 billion. The size of the mobile payment market in the US is expected to increase to US\$118 billion by 2018.

The worldwide mobile payment market will reach 1 quadrillion won (US\$899 billion) in 2018, according to market research firm IDC. The market is expected to grow 30 to 40 percent each year. Transaction fees are likely to amount to 5 trillion won (US\$4.5 billion) in 2017.

Meanwhile, most U.S. consumers are reportedly still not familiar with Apple Pay released in October last year. According to InfoScout's recent report, only 6 percent of iPhone 6 users in the U.S. have used the mobile payment service, whereas 85 percent have never attempted to do so. The other 9 percent tried to use it but failed, as they forgot how to use it or did not know where an affiliate was. The report is based on the answers from 1,188 iPhone 6 users who participated in the survey last week. iPhone 6 and iPhone 6 Plus users can make payments by using his or her credit cards in the handset at any

affiliate store having an NFC terminal, but payment errors have been reported with frequency.

With Apple Pay shunned by not a few consumers, attention is being paid to the initial performance of the Samsung Pay that is scheduled to make its debut next month. Samsung Pay supports not only NFC payment as Apple does but also supports magnetic secure transmission (MST). Samsung Electronics predicts that its payment service will be more universal, as about 90 percent of affiliates in the U.S. use magnetic card readers.

Critical factors

Security technology is the most important factor to dominate the mobile payment market.

Samsung's LoopPay is likely to strengthen security with a finger recognition solution based on technology related to magnetic secure transmission.

Apple encodes payment information with a payment card technology called tokenization, and stores information on a security chip in the iPhone to respond to information leakage.

Google, on the other hand, stored payment information on Google Wallet after its launch in 2011, but temporarily discontinued the service in 2013 due to the possibility of hacking. After that, it resumed the service in a way that does not store payment information. However, the service is widely acknowledged to still be vulnerable. Unless Google improves the security of its payments service, Google Wallet is likely to be a tempest in a tea cup. ☞



Function Comparison

Competition Heating Up in Smart Watch Market



Apple unveiled its first wearable device, the Apple Watch, on March 9 (local time). The company explained that the watch provides zoom-in, zoom-out, and navigation functions as well as screen enlargement and scrolling. Still, some experts said that the gadget is less innovative than expected, and its design falls short of expectations as well.

The Apple Watch comes in various types, 34 to be specific, including the Apple Watch Sport using aluminum, a stainless steel-based Apple Watch, and an Apple Watch Edition that uses 18 K gold. The prices range from US\$349 to US\$17,000.

In contrast, Samsung Electronics' Gear S comes in only one type, although white and black straps are available. Analog watch straps in general can be used in LG Electronics' Urbane LTE.

LG Electronics' product, which has a circular shape, is the closest in design to normal watches. The Gear S and Apple Watch have a quadrangular shape with rounded corners. The Gear S has a curved display sitting comfortably on the wrist, whereas the Apple Watch uses a flat display. All three companies adopted self-developed operating systems for the watches.

They have phone calls, text message, and email alarm functions in com-

mon. The only difference is that the Apple Watch cannot make a call due to the lack of a communication module. Also, each of the three comes with pulse and GPS sensors.

The Apple Watch and Urbane LTE allow for mobile payments. Samsung Electronics' new smart watch is expected to provide the Samsung Pay feature. The Urbane LTE stands out when it comes to battery duration. It has a battery capacity of 700 mAh, whereas that of the Gear S is 300 mAh. Apple did not disclose the battery capacity of its product. According to CEO Tim Cook, it can be used for one day after being fully charged, and takes 90 minutes for an 80 percent charge, and 150 minutes for full charging.


Until now, the short battery life of smart watches has been common concerns. According to an industry source, Samsung Electronics' Gear S can last up to 24 hours with a single charge, as can LG Electronics' Urbane. Sony's Smartwatch 3 can run up to 48 hours, while Apple's Apple Watch only lasts 18 hours.

That is the reason why Samsung Electronics tries to use its own 14 nm Exynos 7420 application processor in its next-generation wrist watch. By using the APs manufactured with the 14 nm semiconductor process, which conserves energy, the company will dramatically improve

the efficiency of the batteries, which is the core competitiveness of wearable devices. Samsung Electronics is expected to use the 14 nm Exynos 7420 application processor in its next-generation wrist watch tentatively named "Orbis."

Samsung Electronics uses the 14 nm Exynos 7420 processor in the Galaxy S6 and S6 edge, which will be released next month. The processing speed of the Exynos 7420 is 20 percent faster than the existing Exynos 5433, while the power consumption is 35 percent lower. Previously, Samsung Electronics used Samsung's own AP Exynos 3250 on the Gear S smart watch. This is in contrast to most Android wearable devices mounting Qualcomm APs.

The Gear S is available at 337,000 won (US\$298). The price of the Urbane LTE is expected to be equal to or slightly higher than that of its previous model G Watch R, which was sold at 350,000 won (US\$309).

According to market research firm Strategy Analytics, Apple is forecast to account for 54.8 percent of the global smart watch market this year by shipping out 15.4 million Apple Watches. The combined sales volume of the others including Samsung, LG, and Motorola is estimated at 12.7 million units. 

by Cho Yeong-jin

IoT Solutions

Domestic ICT Companies Unveil IoT Business Solutions One After Another



Hong Won-pyo, president and chief marketing officer of Samsung Electronics, gives the keynote speech at CeBIT 2015 in Hannover, Germany on March 16 (local time).

Samsung Electronics revealed the solutions of IoT at CeBIT 2015 in Hannover on March 16 (local time), Germany and announced that it would launch a B2B business.

At the exhibition, Samsung showcased about 90 solutions, including six different B2B solutions that range across retail, education, healthcare, transportation, hospitality, and finance, and another solution for 50 cooperative companies. Also, various mobile health solutions using smartphones and tablets were displayed.

A mobile fitness coaching solution for heart disease patients received a lot of attention. The solution provides users with remote healthcare services in which small sensors measure and analyze the health condition of users who are exercising, such as heart rate and blood pressure, and send information to medical teams.

Also, Samsung disclosed security solutions for WiFi, including safety access points, designed to enable government, medical, and financial services to use wireless connections quickly and safely.

In order to address this problem, Samsung Electronics is introducing the highly compatible platform of the Smart Things and pushing ahead with various projects focusing on the health and smart building sectors to accumulate know-hows of data analysis.

Samsung Electronics appears to have an intention to expand its reach to the field of autos, the Internet of Things (IoT), and robots by targeting the system semiconductor market using Exynos chips. The specific question this time is whether or not the Korean tech giant will enter the driverless car market.


Recently, Samsung mentioned the IoT, wearable devices, autonomous cars, virtual reality, 8K TVs, and robots as directions for the evolution of future technology after 2015 on the English home page of Exynos chips. The company added that its own application processors (APs) can contribute to this kind of technological innovation.

The industry is paying attention to the fact that the company mentioned autonomous cars among the many practical uses

of Exynos chips. Last year, Samsung already suggested the possibility of featuring an iris recognition function in the 20-nm Exynos 7 Octa used in the Galaxy Note 4 on its home page.

As rival companies like Apple and Sony seem to be preparing to penetrate the driverless car market, there is no apparent reason for Samsung to hesitate. Apple has been involved in a project named Titan for one year, according to overseas media outlets. Titan is the name of its project for an autonomous electric mini-van.

Sony also bought a 2 percent stake in ZMP, a Japanese robot car start-up, by investing 100 million yen (929 million won, or US\$839,878). The company is reportedly planning to develop driving solutions by combining its own image sensor technology and ZMP's technology in artificial intelligence. The LG Group, LG Electronics, LG U+, LG Innotek, and LG Chem are engaged in auto-related businesses of displays, automotive electronics, modules, and batteries. In particular, LG U+ recently inked a supply deal with a Middle East country for its smartphone mirroring system for automobiles, the Car Link. Those LG subsidiaries turn over more than 1 trillion won (US\$901 million) per year.

SK Telecom is pushing to use a new operating system (OS) called Mobius, an open-source Internet of Things (IoT) platform unveiled in December of last year. It is due to the fact that there is an increased demand for open-source platforms in every kind of product. The government also anticipates that Mobius will play a major role in dominating IoT standards, stemming from its open-source strategy that allows even customers using other mobile carriers to use services provided by other smart device manufacturers. 

by Cho Yeong-jin

Unprepared Cloud Services

Passage of Cloud Computing Act Posing Concerns for Korean Service



After the “Act on Promotion of Cloud Computing and User Protection” passed the National Assembly on March 3, relevant system construction and system integration orders are expected to increase rapidly. And the companies most expected to benefit from the new legislation are Samsung SDS and SK C&C.

With the new law, nearly 10,000 organizations under the government, including government ministries, public institutions, and public schools can change to cloud computing systems and use those services.

Until now, public institutions had to have their own computing systems. However, the passage of the bill enables them to replace it with the cloud services. Also, they can consider introducing cloud services first when they plan information-oriented businesses and budgets.

Jeon Yong-ki, an analyst at Hyundai Securities, said, “When the government agencies adopt cloud computing systems, it will affect private organizations. After the Chinese government introduced Alibaba’s cloud computing, about 3,000 companies and public organizations adopted the system in a short period of time.”

Beginning from this year in particu-

lar, system orders worth estimated to be worth up to 1 trillion won (US\$900 million) annually are expected to be placed in order for the governmental and private organizations to introduce cloud computing. Also, the demands of services for the government and companies to increase business efficiency will rapidly increase, he said.

He believes that integrated cloud infrastructure will help revitalize the big data industry and contribute to the medical cloud services, fintech, and the Internet of Things.

He added, “Companies that have the cloud infrastructure in the country can enter the market of such a system order. As they can attract many government and company customers to their own cloud infrastructure, it is possible for them to create new profits.”

On the other, according to the new cloud act, public institutions in Korea have to raise the ratio of the use of cloud computing services provided by private companies to at least 15 percent by 2017. Before the passage of the bill, cloud computing in such institutions was restricted for security reasons.

Korean cloud computing companies are anxious despite the passage of the bill. This is because foreign cloud computing service providers supplied a lot of their products and solutions to both the public and private sectors during the two years when the bill remained pending in the National Assembly, whereas the Korean companies supplied nothing to the public sector and only a few to the private sector.

Under the circumstances, those who participated in the discussion session hosted by the Ministry of Science, ICT & Future Planning on March 10 demanded that the enforcement ordinance and bylaws be modified in favor of domestic companies because the act, tabled two years ago, cannot reflect the current situation in the industry.

“As of now, it is foreign companies that are likely to benefit from the bill,” said an industry insider, adding, “Flexible measures are required regarding the introduction and utilization of cloud computing services in the public sector, because the degree of dependence on cloud computing services is higher than that on software programs.”

by Cho Jin-young

Era of SDNs

Boom of Software Defined Networking Market Coming



A growing number of local telecommunications and global ICT companies are using Software Defined Networking (SDN) and Network Function Virtualization (NFV) in communications networks. They are vital for 5G technologies. The move can be interpreted to mean that competition to dominate technologies is intensifying so that they can stay one step ahead of the competition for the 5G era.

SDN is composed of software for a control arena, which enables the system to control communications networks across the country just by managing software in the control tower. It is more efficient than the hardware-based method, which necessitates technicians to go to base stations in order to control communications networks.

NFV is a method able to separate hardware from software and thus reduce unnecessary hardware, using software virtualization technology in networks.

SDN and NFV are emerging as essential technologies for 5G networks. SK Telecom, KT, and LG U+ are accelerating efforts to develop new networks and services, using the two methods in wired and wireless networks.

SKT predicts that the market related to SDN will grow 89.4 percent over the next five years. The largest carrier in the nation is involved in the Open Network Operating System (ONOS), an open-source project to develop SDN. The company attended the first board meeting as a founding member, which took place in San Jose, California last month. It was decided to develop technologies with global network

companies like AT&T and Huawei, and they are going to dispatch developers to the ONOS.

KT showcased a new corporate service using ultra-fast GiGA wireless networks (GiGA office) in November 2014. A GiGA office enables small and medium-sized enterprises (SMEs) to save money and personnel needed to operate ICT equipment. It is made possible by storing various kinds of IT equipment owned by SMEs using a vacant space in KT's regional branches, and by providing support for managing ICT infrastructure, including communications networks.

LG U+ is also actively seeking to virtualize the Evolved Packet Core (EPC) and the IP Multimedia Core Network Subsystem (IMS) through NFV, which are essential for end-to-end IP service delivery across LTE. The carrier successfully developed a hybrid SDN switch last year, based on OpenFlow, which is considered to be the first SDN standard. The company also tested the performance of different types of SDN equipment. In particular, LG U+ and Nokia agreed to use NFV equipment in the Korean carrier's LTE network.

Global IT companies like Google and Facebook are working to introduce SDN as well. Google has succeeded in providing services to customers around the world at high speed by controlling 13 data centers worldwide using SDN. The search engine giant was able to reduce costs by increasing line utilization to more than 95 percent from 40 percent through SDN.


Facebook is also intensifying efforts

to develop related network technologies based on SDN so that it can provide faster Internet services.

Under the circumstances, the Electronics and Telecommunications Research Institute (ETRI) hosted an international conference related to SDN to review a report for international standards and draw up standard documents. The event took place in the main office of the Telecommunications Technology Association (TTA) from March 9 to 13.

Participants discussed how to standardize Transport SDN (T-SDN). T-SDN refers to a technology capable of providing private line services that users can use conveniently by automating and opening up the management of the transport network. Industry analysts are saying that it is one of the areas that are likely to be commercialized first among the field of SDN technologies.

Currently, it is impossible to use private line services, or it takes several days or weeks between telecommunications service providers or in a network environment composed of different kinds of communications equipment. However, T-SDN enables connections by controlling software, and that takes just minutes or seconds.

In addition, the meeting also discussed topics such as the structure and modeling of T-SDN-related controllers, and standardizations of control communications for facilitating communications between a specific network interface controller (NIC) and the control equipment. 

by Jung Suk-ye

Profitability Comparison

Profitability of Major Korean Manufacturers Declining



Apple and Toyota are enjoying high profitability thanks to new products and foreign exchange factors, whereas Samsung Electronics and the Hyundai Motor Group are failing to improve their profitability.

According to industry sources, Toyota's estimated operating profits increased about 20 percent to approximately 2.7 trillion yen (US\$22.7 billion) between the fiscal years of 2013 and 2014. The amount, about 200 billion yen (US\$1.7 billion) more than previously expected, is the highest since its inception. Toyota had recorded an annual operating profit growth of 74 percent in 2013 as well, on the back of the weak yen.

Meanwhile, Hyundai Motor Company's business profits dropped 9.2 percent last year to stand at 7.55 trillion won (US\$6.80 billion). This amount is the lowest since 2010, when its annual profits were 5.9185 trillion won (US\$5.3335 billion). The business profit ratio fell from 9.5 percent to 8.5 percent, too. Likewise, Kia Motors' operating profits dropped 19 percent year on year to 2.5725 trillion won (US\$2.3183 billion) with its business profit ratio falling from 6.7 to 5.5 percent. This is the first time in four years that Kia Motors' profits are below 3 trillion won.


In the meantime, Apple has outpaced Samsung Electronics in terms of quarterly profits since 2011. According to Thomson Reuters, Apple's net profits for the last quarter of 2014 are estimated at US\$15.3 billion, while Samsung Electronics' business profits were 5 trillion won (US\$4.5 billion) or so during the same period. The former's business profit ratio reached as high as 39 percent in the fourth quarter of 2011 and has remained over 30

percent in the following quarters. In contrast, Samsung Electronics has continued to fall since it rose to 20 percent in the first quarter of last year.

The Chinese manufacturing also is affecting the international standing of Korean industry. The Hyundai Research Institute said on March 8 that the Chinese manufacturing industry is evolving so fast that it threatens the position of the Korean manufacturing sector in the global arena.

According to a recent report, Korea recorded 106.9 points in 2013 in its export advancement index for evaluating the technological level and added-value productivity of major export items of countries. The United States recorded 103.0, Japan 111.7, and Germany 108.5. Back in 2000, Korea's score had been 94.3, whereas the other three had placed at 100.8, 103.4, and 104.8 each.

Korea's IT sector accounted for no less than 26.7 percent of the index. By industry segment, precision machinery such as flat display panel manufacturing recorded 100.4, and semiconductor and electronics product manufacturing recorded 107.0. The chemical product index was 96.5, short of those of advanced economies. China marked 91.7 in this category. In the steel sector, China (104.5) was nipping at the heels of Korea (108.6), Japan (107.1), and the U.S. (109.2).

"In many fields except for the IT sector, Korea is competing fiercely with or lagging behind the global leaders," the institute explained, adding, "Besides, China is emerging rapidly to aggravate Korea's catch-22 situation."  by Cho Jin-young

Semiconductor Design Tech

Samsung Runs Critical Semiconductor Design Projects, Including Mobile AP

Samsung Electronics has started running projects in order to improve its own semiconductor design ability. This is mostly because Samsung Electronics Vice Chairman Lee Jae-yong has directly instructed them to do so. The company also intends to maintain its initiative in semiconductor design technology, which is the foundation of not only mobile devices but also the upcoming era of the Internet of Things (IoTs).

According to the semiconductor industry on March 17, Vice Chairman Lee recently ordered the company's executive team "to strengthen technology capability in order to design not only mobile devices but also various semiconductors."

So Samsung Electronics' System LSI division has recently started its own custom core technology development project for mobile application processors (AP). The company expects that it will see results by Q1 next year at the latest.

Samsung Electronics is to use its own 14 nm Exynos 7420 application processor in its next-generation wrist watch tenta-

tively named "Orbis as well as in the Galaxy S6 and S6 edge. The Orbis features a round display rather than the existing square-shaped smart watches. The 14 nm manufacturing process means shaping the line width of semiconductor circuits in the submicron size of one billionth of 14 meters. If the width of the circuit decreases, electrons move faster and energy consumption rates decrease as well.

Unlike Apple and Qualcomm, Samsung Electronics has not possessed its own custom core technology mobile APs, the heart of smartphones. The company is also making progress on a project to develop smartphone chips integrating mobile APs and modems, for which the company has been depending on Qualcomm until now.


Samsung Electronics aims to mount its own integrated chip on high-end smartphones to be released after the Galaxy S6. The company will also expand its foundry businesses, which mostly produced mobile APs, and gradually diversify product groups such as graphics processing units (GPUs) and central processing units



Lee Jae-yong, vice chairman of Samsung Electronics.

(CPUs) for PCs.

Since GPUs and CPUs have much more intricate structure than a mobile AP, they require more advanced processing and designing technology in the process of production. Samsung has signed various technology licensing contracts with STMicroelectronics.

Some say that Samsung Electronics should positively consider M&As with competitive semiconductor design companies in order to drastically improve the company's technical skills, since it started later than its competitors. 

by Cho Jin-young

Mass-production of 14 nm AP


Samsung Electronics is starting to mass produce its new mobile application processor (AP) using its 14 nm class process technology. What is noticeable is that the success or failure of the technology and its own AP can determine whether or not the tech giant will be able to become the true number one semiconductor company in the world.

Samsung began to mass produce the Exynos 7 Octa using the 14 nm FinFET production process. The new AP is going to be used in the next smartphone models, including the Galaxy S6.

The product performance of the 14 nm AP is 20 percent better than a 20 nm AP, according to the company. Moreover, the new model consumes 35 percent less power, thereby contributing to its longer battery life. Its productivity is also enhanced by 30 percent.

The industry is paying attention to whether or not the mass production of the 14 nm AP will be a catalyst for the system LSI business to turn profitable. Samsung's share of the AP market decreased from 9.4 percent in the first quarter of 2013 to 3.0 percent in Q3 2014.



Now, Samsung's AP competitiveness has increased to the level of its rival companies. Hence, the situation is likely to change. Samsung's AP is ahead of Qualcomm's latest product Snapdragon 810. Apple also asked the system LSI business to produce chipsets that are going to be featured in the next iPhone models. 

by Jung Yeon-jin

Evolution of Display

LG Display Completes Development of Transparent Display Technology



Transparent 18 inch OLED panel developed by LG Display in 2014.

The shape of smartphone screens, on which you can enjoy movies and dramas, is no longer a square box. It doesn't break even if you twist or bend it. And you can now just pick it up and carry it. Display technology, which expresses data in visual images, has been steadily evolving.

A senior official from LG Display said on March 23, "The development of display technology that creates a virtual space on glass is already completed, and even a promotional prototype is available. However, it will take time until the product becomes commercialized due to mass production according to demand and stable supply."

LG Display and Samsung Display, two leading companies in the global display market, have a 50 percent worldwide market share. To keep that share, they are both working on two types of new technologies that will offer new experiences to users – transparent displays and flexible displays.

Transparent displays can create a

picture that you can see when looking through glass. Currently, this technology is partially used in commercial aircraft, fighter planes, and billboards. They are also being used for heads-up displays that present vehicle driving information on the glass in front of a driver in luxury sedans built by Hyundai Motor, Mercedes-Benz, and BMW.

The technology was also being used in refrigerators. Transparent refrigerators allowed consumers to see inside and look at advertisements at the same time. However, they failed to be commercialized due to lukewarm responses from housewives, which were the main target of the product. Nevertheless, transparent refrigerators are expected to create demand for business use, including in convenience stores, in the future.


The other promising field is flexible displays. It is a paper-like display that produces the same picture quality even if users bend it. The core of the technology is to display objects as accurately as possible and maximize portability by making

it as light as possible.

The stages of evolution in flexible display technology have been defined as curved, bended, foldable, and rollable. LG's G Flex 2 and Samsung's curved edge displays, which can bend up and down and side to side, are between the first and second stages.

An official from Samsung Display said, "The industry believes that the commercialization of foldable smartphones will be possible in 2016."

Flexible displays have been mainly used in mobile devices, such as cellphones and wearable devices, so far. However, the technology will be expanded to the entire IT industry, including laptops and monitors, when the technology can be used in large areas in the future.

An official from the industry said, "When flexible display technology is being used in e-books and laptops, which are substituted for publications, the concept of tiny portable PCs and e-books will be realized in reality." 

by Cho Jin-young

Impact of Low Oil Prices

US\$25 Billion Will Disappear This Year Owing to Low Oil Prices



Approximately US\$25 billion (27.5 trillion won) of overseas construction orders is expected to vanish due to plunging international oil prices. The overseas construction industry, which commemorates its 50th anniversary this year, is expected to face a difficult year owing to high dependence on orders from the Middle East.

According to the Hyundai Research Institute on Feb. 25, if international oil prices (based on Dubai oil) drop by 10 percent, the order amount of overseas construction will be reduced by US\$6.88 billion annually. Based on U.S. Cambridge Energy Research Associate (CERA), the Dubai oil price is expected to drop from US\$100 down to US\$64 per barrel this year. If this figure is applied to the analysis of Hyundai Research Institute, overseas construction orders this year will drop by US\$24.8 billion. This means that a third of last year's overseas construction


orders (US\$66 billion) will disappear.

This is because the Middle East is home to most of the orders that domestic builders receive in overseas construction. The amount of orders from the region accounted for 47.5 percent of the total order amount last year. But as of Feb. 24, the order amount dropped by half to US\$13.7 billion compared to the same period last year.

The Korean construction industry has grown as fast as national economic development since Hyundai Construction & Engineering got its first order from Thailand for highway construction in 1965 when the per capita income was US\$105. The accumulated overseas order amount as of January this year reached US\$683.9 billion.

Domestic construction investment increased by 10 percent on annual average from 1970 to 1997. The overseas

construction order amount in 2010 was US\$71.6 billion, jumping seven times from that in 2005 which was US\$109. Currently, the order amounts have been recording over US\$60 billion each year. The research institute said that overseas construction orders are shaking as international oil prices plummet.

The Hyundai Research Institute statement read, "President Park Geun-hye is planning to visit the Middle East from March 1, and she should do active sales diplomacy with the countries in the region so that there would be no cancellation of construction orders." The institute pointed out also that in the long term, the overseas construction market should be not only diversified, but also the number of power plants and oil facilities should be reduced. Right now, they account for around 80 percent of total orders. 

by Cho Jin-young

Landmark Building

Hyundai E&C Wins 230 Billion Won Contract in Singapore

Hyundai Engineering and Construction (Hyundai E&C) said on Feb. 26 that it received a new contract to construct Fraser's Tower worth US\$211.46 million (about 233.6 billion won) from FC Commercial Trustee, a subsidiary of Singaporean real estate development company Fraser Centrepoint.

This office building will be comprised of three basements, 38 floors, and an annex totaling 77,162 square meters in area. The construction begins this April and it is expected to be completed in


March 2018.

The building will be situated at Cecil Street, which is in the most concentrated central business district in southern Singapore. So, it is expected to become a landmark in the region in the future.

An official from Hyundai E&C said, "The order this time is meaningful in that we got it by being recognized for our successful water town complex development in 2012, a US\$380 million project received from the same contractor."

The Korean builder received an order



for Marina South complex development worth US\$1.3 billion, which is the highest single construction project in Singapore, in 2013. This company has been building at 14 different sites altogether worth US\$4.487 billion in the city. 

Cars Dropping

Carmakers' Sales Volume Fell Short of Expectations Last Month



Automobiles bound for overseas markets are waiting for shipment at the international auto pier of Pyeongtaek-Dangjin Port.

Hyundai Motor Company, Kia Motors, GM Korea, Renault Samsung Motors, and Ssangyong Motors sold a total of 646,236 cars at home and abroad in February this year to record a 6.5 percent year-on-year drop. The domestic sales volume also added up to 103,202, 3.6 percent down from a year ago and a 17-month low.

Hyundai's sell-through fell 5.5 percent to 359,982. Still, the sales volume of the Sonata Hybrid reached 1,154 in the domestic market to show a growth rate of approximately 300 percent. In Korea, it sold 26,402 cars last month to post a 2.6 percent decrease from a year earlier. Kia Motors sold 221,669 cars, 12.3 percent and 8.7 percent down compared to the previous month and year, respectively.


Meanwhile, Renault Samsung Motors' sales volume increased 102.5 percent year-on-year to 15,630. It shipped out 10,426 cars to overseas markets, 260 percent up from a year ago, even though the number of business days was three less than in Feb. 2014 owing to the holiday season.

GM Korea sold 39,381 cars to show a negative growth of 23.7 percent month-on-month. Ssangyong Motors' sales volume stood at 9,724 due to decreased exports to Russia. The number is 5.8 percent and 17.6 percent less than a month and year ago, respectively.

In the meantime, the exports of domestic automobile companies to Russia are plummeting because of the weak ruble.

According to the Korea Automobile Manufacturers Association on Mar. 1, the amount of Russian exports from five domestic car makers totaled 3,097 units in January, 71.5 percent of the same period last year (10,862 units).

The decrease in exports to Russia also affected the exports to neighboring countries in Europe but outside of the E.U. Exports to non-E.U. European countries in January amounted to 6,591 units, a 62.9 percent reduction from last year. This reduction affected all auto exporters equally. Hyundai Motors decreased to 2,691 units this January from 5,622 units last year; Kia Motors dropped to 2,417 units from 4,417; and GM Korea fell 1,363 units from 6,688. All three carmakers indicated that the inability to break even with sales were the reason for sharply reducing shipments to Russia. In fact, Kia Motors expressed that it is hard to make a profit in Russia because of weak ruble at the fourth quarter performance conference held in January.

However, Kia has a different Russian strategy, which is concentrating on selling the locally-produced Rio (a.k.a. Pride in Korea) to maintain its Russian sales network. With this strategy, Kia Motors made progress by selling 11,346 cars in the Russian market, which is 1 percent higher than the same period last year. Hyundai Motors sales also increased 15 percent with 12,707 units sold this January due to favorable sales of their locally-produced Solaris (a.k.a. Accent in Korea). 

by Jung Suk-ye

Inexorable Popularity

Imported Cars Sales Sharply Increase Even in Smallest Month



The Volkswagen Golf 2.0 TDI sold most with 823 registered units in February.

Although the number of operating days in February were reduced both by the shortness of the month and the Lunar New Year holiday season, the sales of imported cars increased 21 percent year-on-year. This increase stands in sharp contrast with those of domestic carmakers, which recorded the lowest sales in 17 months.

The Korea Automobile Importers and Distributors Association reported on Mar. 5 that the newly-registered imported cars in February increased 21 percent from last year, selling 16,759 units. The accumulated sales since the beginning of this year to the end of February increased 27.8 percent from the same period of last year, at 36,689 units.

By brand, Mercedes-Benz ranked first for two consecutive months from January with 3,055 units. BMW, which was third last year, won second place this year with 3,004 units, and Volkswagen came in third with 2,913 units. Audi ranked fourth with 2,446 units, down two levels from last year. Ford ranked fifth with 687 units. Lexus became sixth with 511 units, beating Toyota (503 units). It is the first time for Lexus to exceed the sales of Toyota.

By model, the Volkswagen Golf 2.0 TDI sold most with 823 registered units, followed by Volkswagen Tiguan 2.0 TDI Blue-motion (794 units), and the Audi A6 35 TDI (641 units). Peugeot 2008 1.6 e-HDI entered the top 10 for the first time in history. The most sold model among gasoline automobiles is Ford's large sports utility vehicle (SUV) Explorer (214 units).


In particular, a total of 4,442 U.S. cars manufactured in the

United States were imported to Korea in January this year, a new monthly record. The amount was 2,039 in January 2014. The import of Japanese cars increased from 2,787 to 4,065 between the two months, and the increment of German car import stood at 19 percent, or 1,547.

The increasing popularity of U.S. cars can be attributed to marketing campaigns by Ford, Chrysler, and GM along with the tariff elimination upon the implementation of the KORUS FTA and the import tariff cut from 2.5 percent to 0 percent scheduled for January next year. Japanese and German cars imported from the United States added to the increment as well.

The popularity of diesel vehicles continued also in February. In total, 11,824 diesel vehicles were registered, which reaches 70.6 percent among all imported cars. Then, gasoline vehicles recorded 25.8 percent with 4,330 units and hybrid cars recorded 3.5 percent with 590 units. Finally, 15 electric vehicles were sold.

In the meantime, Korean automakers' domestic market share is on the decline. Hyundai Motor Company's domestic sell-through fell 8.8 percent from a year earlier to 46,859 cars in February. The company took up 41.3 percent of the Korean market last year, and the percentage was 69.3 percent when the market share of Kia Motors was added. The figure, which used to be close to 80 percent, dipped below 70 percent for the first time since their merger in Dec. 1998.

In January this year, Hyundai and Kia accounted for 38.1 percent and 27.8 percent of the domestic market, respectively. Expert consensus is that the shares are likely to keep dropping for a while. 

by Jung Suk-ye

Scapegoats of Free Trade

Korean Petrochemical Industry to be Most Affected by Korea-China FTA



The Daesan Chemical Complex in South Chungcheong Province, South Korea, is home to a Samsung petrochemical plant.

Those in the petrochemical industry are unhappy about the provisionally-signed Korea-China FTA, because the synthetic resin and rubber imported from China will be subject to immediate tariff elimination. Tariffs on most of the major items exported to China, however, are to be maintained or slowly eliminated over 15 to 20 years.

According to industry sources, China's petroleum product self-sufficiency rate is on a rapid increase, based on aggressive facility expansion. This has resulted in a decrease in Korean petrochemical companies' exports to China for three years in a row. Specifically, the exports increased from 67.27 million barrels to 76.73 million and further to 91.91 million between 2009 and 2011, but dropped to 84.45 million in 2012, 76.15 million in 2013, and 60 million or so last year.

In the meantime, the daily oil refining capacity of China went up from about eight million barrels in 2008 to over 10 million in 2010, 11.93 million in 2012, and 12.59 million in 2013.

At present, the Korean chemical product market is considered to be 39 months ahead of China's in terms of size. However, according to the Korea Petrochemical Industry Association, China's is expected to be seven years and seven months ahead of Korea's in 10 years. When it comes to technological competitiveness, Korea is ahead of China by a margin of 62 months now, but the gap is predicted to be narrowed to 21 months in 10 years.

Under the circumstances, Korean petrochemical companies are focusing on market diversification from China to the Philippines, Australia, Malaysia, Indonesia, Russia, and Europe, based on the recognition that China is no longer a major client but a potential competitor.

Australia has continued to shut down refineries since 2013 and facilities equivalent to 30 percent of its production capacity were removed in 2014 alone. In other words, the country is turning itself into a petroleum importer, and Korean companies are trying not to miss out on the opportunity. They exported 4.751 million barrels to Australia in January this year,

to record a 169 percent increase from a year ago. In addition, the export volume amounted to 4.879 million barrels in December last year. At present, Australia is one of the four main export destinations along with China, Japan, and Singapore.

In the meantime, their petroleum product exports to the Philippines soared from 9.8 million barrels to 15.15 million between 2011 and 2013. Also, the amount is estimated to be at 11.99 million barrels for the first half of last year. SK increased its export to the Philippines from 660,000 barrels or so to over 6 million barrels between 2012 and last year by making the most of its idle facilities in Korea, to meet the requests for small quantities of a wide variety of products specific to the country.

GS Caltex is concentrating on the Russian and European markets. It built a composite resin production plant with an annual capacity of 30,000 tons in the Czech Republic three years ago, while expanding its lubricant business in Russia. S-Oil recently launched high-quality lubricants in Thailand, Cambodia, Mongolia, and Myanmar, too.  by Jung Suk-ye



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Fostering Brilliant Ideas

Large Corporations Increasing Investments in Startups




The Maru 180 building, a startup incubator set up by the Asan Nanum Foundation in 2014.

Investment firms and foundations associated with large corporations such as Hyundai, POSCO, and LG are continuing with their investments in startups to foster the growth of the venture industry.

One of the examples is the Asan Nanum Foundation, established in 2011 by the founders of Hyundai Heavy Industries. Its starting capital of 500 billion won (US\$454 million) has gone to a number of startups, and its Chung Joo-yeong Startup Competition celebrates its fourth anniversary this year. Novato, which won the top prize in the second competition, was acquired by Pandora TV last year.

POSCO raised a fund of 20 billion won (US\$18 million) four years ago and has created the POSCO Venture Partners program since then. The program is characterized by providing 1 billion won (US\$909,000) or so, along with mentoring for young firms with brilliant ideas. More than 50 startups have benefited from the program so far. The developer of the Jikbang mobile application for real estate searches is one of the beneficiaries.

LB Investment, which was LG Venture Investment, has invested billions of won in each of its beneficiaries. For example, it invested 9 billion won (US\$8 million) in 4:33, a game application developer, with Korea Investment Partners two years ago. It also invested more than 2.5 billion won (US\$2.2 million) in Yellow Mobile, an association of 60 or so venture firms, and the mobile fashion platform of Style Share.

"In the past, big businesses' investment in venture firms was more about corporate social responsibility and public relations," said an industry expert, adding, "These days, however, they seem to be focusing on the growth of the venture sector, and startups have high expectations for their investment on their part." 

Offer One Can't Refuse

PayPal Mafia to Cultivate Korean Start-ups with Creating Acceleration Fund



From left: 500 Startups CEO Dave McClure holds an MOU to raise an acceleration fund with Han Jung-hwa of the Small and Medium Business Administration and Cho Gang-rae of the Korea Venture Investment Corp at the Millennium Seoul Hilton on Feb. 26.

The so-called PayPal Mafia, a group of former PayPal employees and founders, is seeking to cultivate Korean start-ups.

500 Startups, which was established by former PayPal employees and founders, will create a fund worth 10 billion won (US\$9 million) to cultivate local start-ups. The move came after Thiel Capital, an investment firm run by PayPal co-founder Peter Thiel, set up a fund for venture firms in the nation last year, in collaboration with the Korea Development Bank (KDB).

The Small and Medium Business Administration and the Korea Venture Investment Corp signed a Memorandum of Understanding (MOU) with 500 Startups to set up the fund. The MOU signing ceremony was held at the Millennium Seoul Hilton on Feb. 26.

Established by Dave McClure, former Director of Marketing at PayPal, the Silicon Valley-based company is a business incubator that supports promising start-ups with 16 weeks of training and investment.

3D printing company MakerBot and Wildfire, both of which were invested in by 500 Startups, have made 10 to 20 times the profits, and they were eventually acquired by Stratasys and Google, respectively. Local online TV service start-up Viki successfully struck an M&A deal with Japanese electronic commerce and Internet company Rakuten, as the Korean company was recognized to be worth 10 times more than the invested amount.

A fund of funds and foreign investors will each pitch in half of the money for the acceleration fund, which will be created sometime in March. In addition to its investment, 500 Startups is going to nurture Korean start-ups in Silicon Valley for 4 months and help venture capital firms in the area provide after-investment support.

In particular, the PayPal Mafia is showing interest in Korean mobile payment technologies. Dave McClure highly praised the growth potential of startups in the country related to the mobile

industry. He said, "I would like to take this opportunity to widen our investment portfolio to the field of consumer goods, enterprise-centered solutions, mobile devices, tablets, and video, and to cultivate promising companies as well."

Peter Thiel, who visited Korea on Feb. 25, reportedly exchanged opinions with Samsung Electronics with regard to cooperation in mobile payment services. Following its agreement with KDB to create a global partnership fund last year, Thiel Capital is also planning to make an investment worth 100 to 200 billion won (US\$90 to \$181 million) in mobile start-ups in the nation during the first half of this year. 

One Stop Startup Solution

Information Sessions Held for Korean Startup Businesses in US



The Korea Innovation Center in Washington, D.C.

The Ministry of Science, ICT and Future Planning announced that it will kick off information sessions in Seoul, Daejeon, Daegu, and Busan from Feb. 9 to provide information to 80 selected startup firms that will be assisted in Korea Innovation Centers (KICs) in the United States.


The KIC program is the Ministry's organization for venture assistance, R&D cooperation, and market penetration support abroad. It was set up in Brussels in Nov. 2013, in Washington D.C. in May last year, and in Silicon Valley six months later.

Those companies selected can make use of the KIC's global investment, startup, and marketing expert networks to procure funds and find business partners. In addition, the KIC in Silicon Valley is planning to provide a KIC-Express Program for full-cycle startup assistance and office space as well. The KIC-Express Program is a 10 week program in which promising startup firms are selected for concentrated support ranging from business incubation to financing.

The KIC in Silicon Valley is going to strengthen cooperation with organizations in Korea so that more Korean companies can find their way into the U.S. market. This includes an investment MOU with Korea Science & Technology (KST) Holdings, the largest IP holding company in Korea founded by the 17 government-funded research institutes of the ministry so as to promote the commercialization of their research outcomes.

The Silicon Valley KIC is planning to help firms funded by

KST Holdings in the U.S. In response, KST Holdings is expected to provide angel investment of up to US\$1 million for each firm recommended by the KIC and satisfying certain investment conditions. Specifically, the conditions include corporate registration and intellectual property ownership in the United States, employment of any one of the research institutes' technology for commercial purposes, and establishment of an R&D center in Korea.

The KIC in Washington D.C., in the meantime, is going to choose 10 to 20 Korean startups at the information sessions and help them make it to the finals of the Mass Challenge in Boston. More than 2,000 venture firms from all over the world join the four-month event each year for mentoring and investment attraction, and those making it to the round of 128 can become attractive investment targets of global venture capitals. 

Nurturing Hidden Champions

Samsung Electronics Seeking to Prosper with 50 Hidden Champions




On Feb. 12, Samsung Electronics vice president Kwon Oh-hyeon (7th from left, front row) attended the ceremony for this year's hidden champions held at the Samsung Digital City located in Suwon City.

Samsung Electronics selected 13 business partners as this year's hidden champions. It is going to choose 50 such companies before the end of this year to concentrate its support on them, too.

The yearly hidden champion program is to find those having technological capabilities and willing to innovate and help them in various ways so that they can rank at least fifth in the world and second in the domestic market in terms of market share.

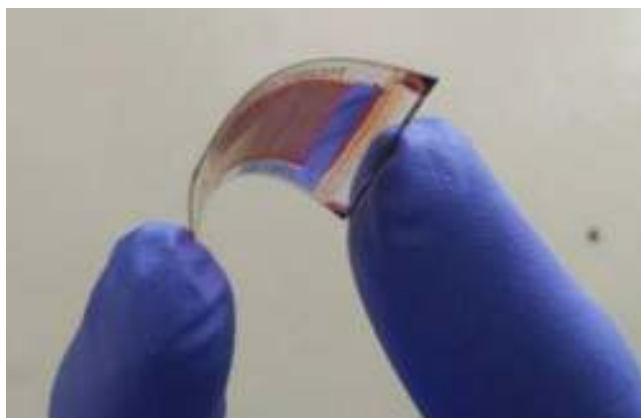
This year, Samsung Electronics selected 11 partners of itself and two partners of Samsung Display out of 35 candidates. The former include Global Standard Technology, Wonik QnC and KH Vatec and the latter are Toptec and Uju Electronics.

Samsung Electronics has invested 36.2 billion won (US\$32.9 million) in 13 companies while carrying out joint R&D and collaboration projects and sending 60 development, purchasing and manufacturing experts and consultants to them. As a result, four of the 13 have recorded the world's second-highest market share in their respective industry segments with two of the others ranking third and fourth each. Samsung Electronics' total investment in such hidden champions amounts to 225.1 billion won (US\$205.0 million). 

by Cho Jin-young

Foldable Solar Cells

Flexible, Organic Solar Cells Developed




A flexible solar cell can still function even when deformed.

Pohang University of Science and Technology research team led by chemical engineering professors Cho Kil-won, Kim Min, and Park Jong-hwan have developed a vertical organic solar cell production technique that produces a solar cell with much-improved flexibility and great endurance to repeated bending.

The organic solar cell uses a flexible organic material as a photo-active material, and thus can be produced via a simple process like printing. When the supporting substrate is plastic, the cell can be bent and applied to wall-mounted film-type batteries or wearables.

Traditionally, substrates, electrodes, and photo-active layers are stacked in solar cells. This stack cannot be bent or folded due to the stiffness of the substrates and electrode materials.

However, the team came up with a novel, horizontal structure that includes semiconductor nanowires. Its new solar cell has only one layer and can maintain photoelectric efficiency even after being bent thousands of times. Because the sunlight directly reaches the photo-active layer, a light-collecting transparent substrate is inessential.

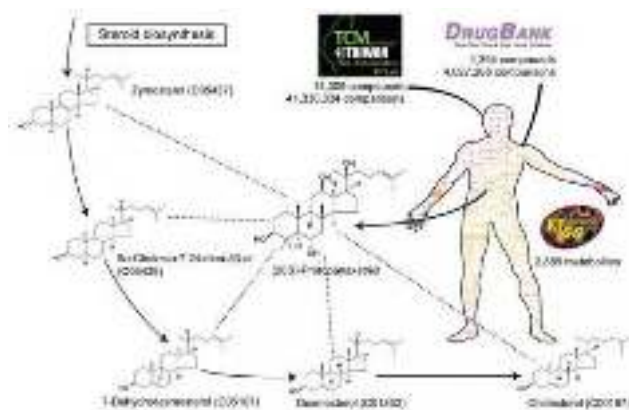
Details of the research can be found in the March 4, 2015 issue of *Advanced Energy Materials* as the cover picture. 

by Jung Suk-ye

Science of Oriental Medicine

Evidence Found for Oriental Medicine Principles

Analyzing structural similarities between compounds derived from traditional oriental medicine and human metabolites, Korean scientists have found scientific evidence in the prescrip-



The picture presents the structural similarity analysis of comparing compounds in traditional oriental medicine and those in all available approved drugs against the structures of human metabolites. (Photo by KAIST)

tion principle of oriental medicine, which treats diseases with the synergistic effects of multiple compounds.


On March 11, Lee Sang-yup, professor in the Department of Chemical and Biomolecular Engineering at KAIST, announced that his research team confirmed the fact that multiple oriental medicine compounds work. His research is based on the synergistic effects of a multi-target approach to investigating the principle mechanisms of action of oriental medicine inside the human body by analyzing the structural similarities between compounds from oriental medicine and human metabolites.

His studies will contribute to the identification of oriental medicine. Until now, oriental medicine was considered unscientific, since it was a mix of multiple compounds, which couldn't identify mechanisms of action and possible liver toxicity. This is in contrast to Western medicine, which recognizes drugs only when they contain a single active ingredient or component developed around a proof-of-concept test of their activity against a single biological target.

Believing that the natural substances from oriental medicine would affect the course of human metabolites, which are similar in structure, the research team analyzed the structural similarities between compounds from oriental medicine, approved medical drugs, and human metabolites, and predicted the metabolic pathway that might be affected by the compounds of oriental medicine.

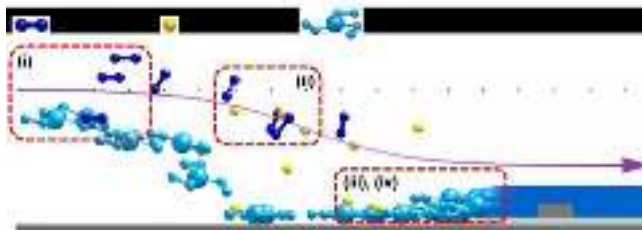
He found out that traditional oriental medicine compounds have higher structural similarities with human metabolites than that of current medical drugs. Also, oriental medicine has more substances with higher structural similarities with human metabolites than that of approved drugs of the Western medicine.

The research team said that it shows that oriental medicine compounds could have stronger medicinal effects on various metabolic responses in the human body compared to approved drugs. Also, traditional oriental medicine compounds could be better for a multi-target approach than current medicines as a result.

The study was published in the March issue of the scientific journal *Nature Biotechnology*. 
by Jung Suk-ye

Core Tech for IoT

KAIST Develops 10 nm Flexible Insulating Film




A schematic breakdown of the chemical vapor deposition technique that creates the polymer film: (i) vaporized ingredients introduced, (ii) catalysts thermally associate into radicals, (iii, iv) radicals cause thin film formation on surface.

The Korea Advanced Institute of Science and Technology (KAIST) announced on March 10 that its research team led by biotech professor Lim Sung-kap and electrical and electronics engineering professors Yu Seung-hyup and Jo Byung-jin have developed a very thin, flexible, yet thickness-maintaining polymer insulating film based on initiated chemical vapor deposition (iCVD).

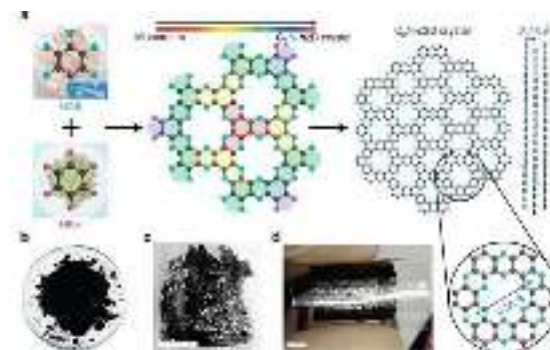
Light, flexible and power-saving devices are essential for the wearable and flexible instruments and gadgets that will constitute the Internet of Things. Electronic devices and materials based on inorganic substances, however, lack flexibility and can be processed only at a high temperature, which results in a poor combination with other materials less resistant to heat.

The research team adopted iCVD to address this problem. This method is characterized by synthesizing polymers in the form of a thin film by using a gaseous reactant instead of a liquid one. They succeeded in improving the uniformity and minimizing impurities by this method, so that the insulation properties are comparable to those of inorganic substance-based materials even at a thickness of less than 10 nm.

Also, the team applied the film to transistors based on next-generation semiconductor products such as organic semiconductors and graphene and oxide semiconductors, to develop a low-voltage and high-mobility transistor. "The iCVD-based thin film has excellent insulation properties, surpassing those of polymer thin films," the team explained, adding, "This film will be utilized in a wide variety of fields, including flexible electronic device manufacturing." The details of the research are available on the March 10 online edition of *Nature Materials*.  by Cho Jin-young

Better than Graphene

Tech Developed to Make 2D Structure Superior to Graphen



(A) Two chemical compounds, hexaaminobenzene (HAB) trihydrochloride and hexaketocyclohexane (HKH) octahydrate, combine to produce the holey 2D crystal C2N-h2D. (B-D) C2N-h2D is a blackish, shiny substance when created.

A Korean research team has succeeded in developing a technology to make a new 2D structure that is superior to graphene in electrical characteristics, which could be used in not only semiconductor devices, but also the fields of energy storage, organocatalysis, and biology.

A research team led by Baek Jong-beom, professor at the School of Energy and Chemical Engineering at Ulsan National Institute of Science and Technology, announced on March 8 that they have successfully developed a technique to synthesize a new 2D structure (C2N-h2D crystal) by utilizing two different benzene compounds where six carbon atoms are combined in a hexagonal shape. The new 2D structure is composed six benzene rings connected with nitrogen atoms in a larger hexagonal shape.

Professor Baek explained that this structure proved to be 100 times better than existing silicon semiconductors in the on/off ratio, after analyzing its structure and evaluating its performance.


There is a certain limit in improving the performance of the silicon used in semiconductors, as the production process becomes minute. As a result, many studies have been conducted to develop materials to replace silicon. In particular, graphene is receiving a lot of attention as a next-generation material owing to its excellent properties.

However, graphene is a conductor without a band gap, an energy range in a solid where no electron states can exist. The material is difficult to be used as a semiconductor, since it is impossible to control the electric current.

The band gap is necessary to control the electric characteristics of materials. To use graphene as a semiconductor, its structure has to be changed in a way that controls the flow of the electric charge. It can be done by widening the gap using a chemical method.

The newly-developed structure has a hexagonal shape consisting of six benzene rings with a combination of carbon and nitrogen to scale. After it was examined using a scanning tunneling microscope, it was found that there was a band gap between the graphene and its inside.

Furthermore, the structure's on/off ratio is 100 times better than that of silicon semiconductors.

The research findings were first published online on March 6 by *Nature Communications*, a bi-monthly scientific journal published by the Nature Publishing Group. 

by Cho Jin-young

Hand in Hand with China

Korea-Chinese Co-production Creates Global Demand



Showbox Mediaplex Co., Inc. a major film distribution company in South Korea, signed a 3 year partnership agreement with Chinese film production company Huayi Brothers Media Corp. to co-produce six films. Showbox, which is the film investment, production and distribution branch of Mediaplex, Inc., and which is in turn the entertainment arm of Orion Group, yesterday announced that it will establish a Chinese unit “Showbox China” under the partnership deal. The Chinese unit of Showbox will receive funding to produce a maximum of 6 films with Huayi Brothers until 2018. The distribution and marketing of the co-produced films in the Chinese market will be in Huayi Brothers’ hands.

In terms of production capacity and distribution networking ability, the Huayi Brothers seem to strengthen the wheels of a Showbox that is trying to get intimate access to inner China, the key Asian market. The Chinese film production company now produces and operates movies, TV shows, talent agencies, music labels, and movie theaters through comprehensive expansion into the media industry. It aims to create the largest TV and film studio complex in East Asia.


Head of Showbox Yoo Jung-hoon expected this partnership deal to help build a positive image for Showbox in China and be a foundation for making profits in the future.

China’s increased commitment to Korean media and entertainment has forced Chinese companies to use their financial clout in South Korea’s entertainment industry. In 2013, Alibaba announced a 100 billion won (US\$907 million) investment in Korean films. Chinese media and content company Huace pledged US\$50 mil-

lion to become the second largest stakeholder of Korean movie studio NEW. Moreover, China’s Juna International bought 3.4 million shares of Chorokbaem Media, Korea’s largest drama production company.

Nowadays, Chinese investors are trying a more aggressive play with Korean partners to co-produce content, rather than to buy company stakes outright. Huayi Brothers invested 25 percent in Showbox’s production of the 2012 movie “Mr. Go.” Chris Jung, chief operating officer of Showbox Mediaplex, explained in more detail by saying, “Showbox accepted the partnership, not because we needed the money, but because we wanted to make this film into a Korea-China co-production, so that this movie can be released in both markets.” Now that they are working together, both are learning how to be a global player in the media universe.

The FTA between South Korea and China is expected to raise the speed of Chinese investment in Korean media. The trade deal clarifies film production and copyright terms that will help remove investment barriers. A film co-production deal was also signed by the two countries last September. According to the pact, Korean films funded by Chinese investors will be acknowledged as China-produced films. The agreement will also allow Korean companies to avoid China’s import quota limits.

“This would increase the speed of partnerships between Korean companies with film production skills and Chinese companies with abundant investment budgets,” said Lee Kee-hyun, head of the policy research division at the state-run Korea Creative Content Agency. 

by Mary Park

Star Re-shining

"Saimdang, the Herstory" to be Framed by Lee Young-ae's Touch



Left: Lee Young-ae, who will play Shin Saimdang in an upcoming TV production. Right: Chochungdo, a painting genre initiated by Shin Saimdang, depicting plants and insects.

Lee Young-ae will be returning to the TV soon. After her marriage and childbirth she took a 10-year hiatus. But her fans couldn't forget her, and still miss her role as the main character in "Daejanggeum," which was also known as "Jewel in the Palace." Exported to over 90 countries, the epic smash hit drama raised the Korean Wave around the globe. Lee spread Korean taste and flavor like a tsunami, surpassing geographic borders and ethnic boundaries.


On March 24, a South Korean drama production announced her appearance in its new project. What induced her elegant choice for a comeback is the life story of genius female artist Shin Saimdang who lived in the 16th century Joseon Dynasty. The producer explained that Lee's high-brow, refined image exactly matches Saimdang enough to guide viewers to rediscover the life of one of the most respected

women in Korean history. Viewers are already anticipating her authentic performance and her role as a civilian ambassador who will introduce the excellence of Korean culture to the whole world.

Lee will play a double role in "Saimdang, the Herstory," which will tell us a story-within-a-story starring a university lecturer of Korean art history who finds a secret diary of the poet, artist, and mother who raised Lee Yul-gok, the greatest scholar of the time. Moving between the past and present, her interactive narration is going to arrest viewers with the full breadth of a free spirit who never failed her dream as a woman, artist, wife, and mother, even in a rigid Confucian society with notorious gender discrimination.

After confirming Lee's starring role, the production agency said that it will begin filming the new TV series in June

after months of pre-production, and from the first half of next year it will start to air. Being aware of her name value and successful career in the cultural content industry, overseas studios are highly attentive to her return. One Chinese production is considering simultaneous releases both in China and Korea.

Depicting the highly-gifted artist Saimdang's passion for art and immortal love for her family, Herstory reinterprets an ancient Korean woman who was an all-around success in every part of life into the contemporary meaning of art, education, and family. She will portray a full and varied life delivering unchanging value to all lives. We as the audience will enjoy her acting, one of Korea's greatest living actresses portraying one of Korea's living national treasures, and expect another rise of Hallyu.  by Mary Park

제29회



도자, 색에 물들다

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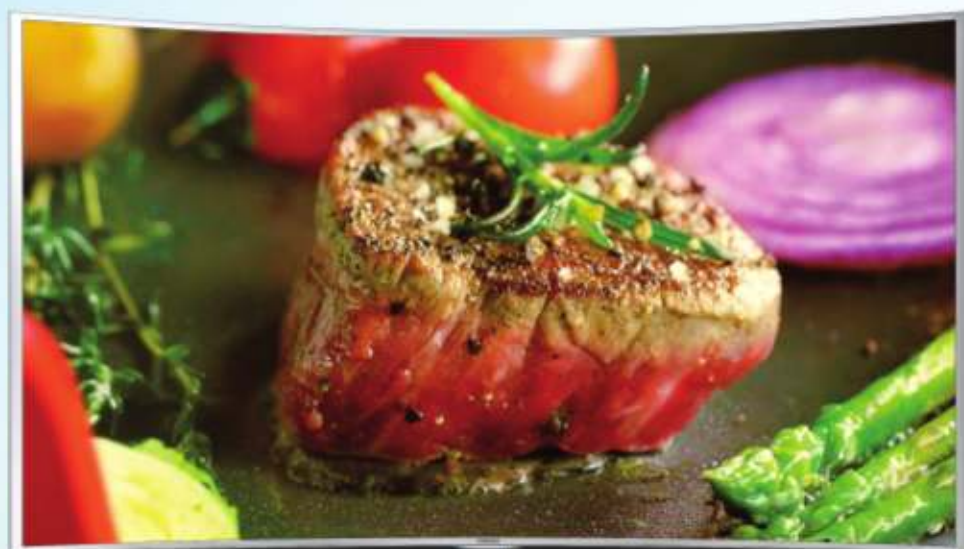


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